

Gaining a Doctorate in Nursing in Chile: a path not without its difficulties

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Objective: to analyze in detail the current situation of doctorate training in Nursing in Chile. **Methodology:** through a historical and contextual analysis of the background to the development of postgraduate education in Nursing, especially at doctorate level. **Results:** aspects that limit development were identified in national institutionalism of the sciences as well as in higher education and health institutions, especially the limited value placed on nursing as an area of knowledge in this country, the lack of clear institutional policies for postgraduate studies, as well as the postgraduate's re-inclusion into the academic and care area, with access to national research funds difficult. **Final considerations:** access to grants and funds, together with recognition as an area of knowledge belonging on academic schedules, especially in health institutions, are the main challenges to consolidation. One aspect that would enable a more rapid advance is through national and international inter-institutional agreements, adding together potential, with access to funds for studies and academic and student internships, enabling joint research to go ahead.

Descriptors: Education, Nursing, Graduate, Chile.

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Introduction

In Chile, the discipline and profession of nursing has undergone profound and significant changes related to the country's political, health, social and economic transformation. It is a long-standing profession of recognized national and international prestige, with undeniable contributions and achievements in developing and implementing public health policies and strategies in this country. As pointed out by the Pan-American Health Organization⁽¹⁾, "nursing is a profession that fulfills key roles in public health in the Americas" mainly through the discipline's perspective of guiding its actions within the promotional, preventive, curative and rehabilitative field throughout the life cycle. This has enabled the use of human, technological and financial resources in health to be optimized, adopting the concept of integrated health care with a familial focus, enshrined in nursing curricula when the nursing school was created in 1927, converting nurses into social actors at the vanguard of this area⁽²⁾, long before the concept was incorporated into the Chilean Health Care Services in the 1950s. From 1952 onwards, Chile developed a centralized state health care system, with high coverage and to which many historians and analysts attribute a great number of achievements, including a sharp drop in infant mortality, increased life expectancy, controlling tuberculosis and eradicating polio⁽³⁾. In almost all of these effects, the participation of nursing professionals is evident, translating into a notable increase in the activities for which this professional is responsible, as well as the efficiency of their primary health care activities, as a result of the greater availability of nurses⁽⁴⁾, evolving until they are transformed into key agents in the Chilean health care team nowadays.

This profession has a history of around 108 years, since 1906 when the country's first Nursing School, at the Universidad de Chile, was set up.

Current situation

At the moment, nursing training in Chile offers 5-year-long undergraduate training programs, and lato sensu and stricto sensu postgraduate programs, in accredited universities where a culture and a commitment to academic quality have been established, and whose plans for improvement, as well as lecturer training are of constant concern in the educational policy and the academic administration in general. In the Nursing degree, students are trained to reflect rationally and

consistently when faced with others' needs, to judge, be sensitive to others and to make informed and correct decisions, creating a culture of investigation and of ethical values, where the meaning of life beyond the material or immediate is clearly understood, thus forming the nature of "being a nurse"⁽⁵⁾, and contributing to better responses to the community's health and clarifying the country's health policies. At postgraduate level there are currently 6 Master's and 2 Doctorate programs in Nursing. The quality of these programs is evaluated at a national level, through accreditation. The conceptual and theoretical frameworks on which nursing is based and which explain the meaning of the phenomena observed, are formed through analysis, reasoning and discussion of care, as well as through studying the philosophical aspects of nursing, with rigorous training in research skills⁽⁶⁾, given the academic character of the disciplines. In these academic programs, the stages that precede the construction of the theoretical models are studied, together with the development of knowledge of the discipline which will define the basis of future models and theories⁽⁷⁾.

The Doctoral Programs in Chilean universities in the Council of Rectors (CRUCH) are guided towards providing advanced skills in the area of research, development and innovation, the Higher Education System's response for promoting tools enabling entrepreneurial and intelligent studies, based on systematic preparation in logical and scientific thinking⁽⁷⁾.

In Nursing, in Latin America, there has been significant development and growth in postgraduate programs since the late 20th and early 21st century, both in terms of matriculations and in the programs provided, which has facilitated understanding of the area and the reach of nursing practice on a social level.

For example, the Inter-Unit Nursing Doctorate Program of the U. de Sao Paulo (USP), was created jointly by the Nursing School (EE) and the Ribeirão Preto Nursing School (EERP) in 1982, the first of its kind in Latin America; this program appeared through joint planning with the aim of joining forces in order to maximize their respective potential in terms of faculty, facilities and conditions for researching the field of nursing⁽⁸⁾.

In Chile, the two nursing programs were created in the 2000s, that of the Universidad de Concepción in 2003 and that of the Universidad Andrés Bello in 2006. Several of the academics who form part of the faculty of current programs were educated abroad.

The Doctorate Program in Nursing at the Universidad de Concepción was drawn up by three academics who

had done their own Doctorates at the Universidad de São Paulo, Ribeirão Preto, Brazil. The course being developed received significant support from this educational institution in the early stages. In the beginning, the work of organizing, developing and setting in motion had to overcome a number of difficulties, mostly due to the "inclusion" of this area of knowledge and the "changing or integrating postgraduates in nursing" into universities or higher education systems, as Wright points out⁽⁹⁾. The Doctorate in Nursing project at the U. de Concepción, began in 1992, when they began to conduct exchanges with various academic units abroad in order to reach critical mass of doctorates in nursing. At the end of this stage, the project was drawn up, approved by the university's Academic Council in January 2003, making it the first Doctorate Program in this discipline in the country, and the first year group started the first course in 2004⁽¹⁰⁻¹¹⁾.

The Doctorate in Nursing project at the Universidad Andrés Bello was born thanks to the cooperative efforts of academics from the faculty itself and from other national and foreign institutions with whom there were cooperative agreements. At the inauguration in 2006, the dean stated: "it will become a space for exchange between new researchers and experts in the area of knowledge of nursing care, to encourage the exchange of ideas, for critical reflection, to generate original scientific, technological and humanistic knowledge, making important contributions to nursing and health⁽¹²⁾.

As we can see, training advanced human capital in nursing goes beyond simply investing time, but also implies structural, political and social investment on the part of the entity proposing it. The average time for training an independent researcher in Nursing in Chile is 4 to 5 years.

In spite of all the efforts made and recent improvements, Chile does not yet have more Doctorate Programs in general⁽¹³⁾, which is also reflected in Nursing⁽¹¹⁾ and, finally, in the low output of doctorates, compared with data from the Organization for Economic Cooperation and Development (OECD). This body concluded that in the cost-efficiency relationship over time, it is necessary to strengthen and create local, high quality, doctorate programs instead of remaining excessively dependent on advanced training abroad. It also points out the need to increase public investment in research, together with the other reforms needed⁽¹⁴⁾. Chilean universities have been calling for this for decades, although the report by the Presidential

Advisory Committee on Higher Education pointed out that, in Chile, universities carry out 80% of all research⁽¹⁵⁾.

If the entry rate of students into advanced programs such as Doctorates is analyzed, it is much lower in Chile, 0.2% in 2005, than the OECD average, which is 2.4%⁽¹⁶⁾. Likewise, the number of professors with doctorates in the academic workforce in Chile is low⁽¹³⁾. Therefore, national policies to improve the quality of academic staff have concentrated on raising this indicator, which is closely related to research and development. The goal for 2015, according to the OECD, is to have half of all full time academics with a doctorate⁽¹⁴⁾. This is particularly important in Nursing, given the contribution this discipline can make to health care systems⁽¹⁰⁾.

As for the number of students graduated from both the Doctorate Programs in Nursing, at time of writing, the program at the Universidad de Concepción had 23 graduates and that of the Universidad Andrés Bello 11. In Chile, the opportunity for talented young people in Nursing to continue on to Doctorate studies is complex and access is difficult, given the time needed, the high costs and the scarce chances of winning a grant. Those with doctorates are still a very small number of academics, with the percentage of those who enter the program from practicing nursing practically marginal.

The quality of a doctorate program depends on the capacity for research shown by the academic center which delivers it⁽¹⁷⁻¹⁸⁾. The strengths and weaknesses of the Doctorate Programs in Chile are shown in Figure 1, which basically highlights their weaknesses, as both Programs are formulated appropriately, train graduates with skills and abilities to conduct independent investigation in the problems in nursing from a qualitative and quantitative perspective, with significant support from the infrastructure and management of the University that delivers them. The weaknesses of the accrediting body are a consequence of an aspect mentioned above: how complicated and difficult it is for talented young people in Nursing to access Doctorate studies, given the time needed, permission required, especially in the area of practice, the high costs and the scarce chances of obtaining a grant, which are directly related to the accreditation of the programs, all of which results in a vicious circle of low productivity, difficulty accessing funds and low availability of lecturers from the faculties in the programs. This in turn gives rise to a small universe of researchers with the training needed to produce independent, competitive and innovative studies.

STRENGTHS	
Doctorate Program in Nursing U. de Concepción (Resolución 2014 ¹⁷)	Doctorate Program in Nursing U. Andrés Bello (Resolución 2013 ¹⁸)
The Program corresponds to advanced level studies within the area of Nursing. It is academically defined and formalized. The overall objective is to guide the training of independent researchers, contributing to managing care. The program is relevant to the academic context of the University. The Postgraduate Board is the body responsible for implementing policies for monitoring and evaluating the administrative and academic management of the postgraduates.	The Program is coherent in its scientific definition, with strong emphasis on research, with the stated overall objective, with the doctoral training and with the institutional vision of the University and of the Nursing Faculty
The selection process has a standardized structure which includes a research proposal in accordance with the lines of the Doctorate	Requisites for admission are clearly defined, disseminated and based on the institutional regulations. The selection process is defined and formalized. Annual demand for the program is, on average, above 9 students (period 2016-2013)
The program is delivered in a Higher Education Institute with policies and resources to deliver a postgraduate course. There are links with foreign and national universities, which has encouraged the participation of visiting academics and student mobility. There are institutional grants and stipends and exemption from fees, as well as access to Conicyt financing	The program has the support of the institution such as infrastructure, libraries, grants and internships to support the students' education. There are agreements with twelve universities abroad and the internships are supported by inter-institutional agreements.
The structure of the curriculum includes basic subjects, specialization, seminars on research, theses and exams, a sequence appropriate to the requirements of the doctorate. The thesis topics are in line with the lines of research of the Doctorate.	
WEAKNESSES	
The proposed alumni profile does not clearly or specifically define the knowledge, abilities and skills students are expected to acquire, but rather lists actions, incongruent with the nature of the course and the defined objectives.	The specific objectives are generic and imprecise regarding the contribution the graduate can make to the discipline of Nursing.
	The program states seven lines of research, of which three are not supported in the objectives or in the academic body. The program would be supported by visitors from abroad. There are several - 6 - theses, being directed by such professors.
	The curricular structure and the thesis topics only focus on research related to care, professional performance and historical aspects of nursing.
The course is of long duration, taking 5 to 6 years to graduate (in contrast to the 4 years stated as the Program duration) and the graduation rate is low (55.6 %).	The length of time taken is higher than that declared in theory, and the graduation rate is low.
The teaching body is made up of 8 professors from the faculty, plus collaborating professors (11) and visiting professors (34). The faculty published an average of 0.65 ISI articles in 5 years and none of them meets the indicators defined by the Commission for the Area. The faculty's scientific productivity is low: publications and external funding awarded.	Of the seven academics, 6 are part of the faculty, and only two of them would meet the productivity indicator for the Health Sciences Area Committee – one ISI publication or equivalent, per academic, per year.
Demand for the programs varied between 4 applicants in 2009 and 12 in 2011.	

Source: Resolutions of Doctorate Program Accreditations - CNA-Chile 2013-2014.

Figure 1 - Strengths and Weaknesses of the Doctorate Programs in Nursing in Chile, according to National Accreditation Commission resolutions for accreditation, Chile, 2013-2014:

The main obstacle to increasing the provision and training for doctorates is resources. For this reason, universities should take responsibility for implementing basic frameworks to support research and lecturing to meet this challenge. For doctorates in Nursing, accreditation presents a great challenge. If the doctorates offered are competitive in ground breaking research and internationalization, they would be able to overcome the barrier and eventually it would disappear.

With regards the number of doctorates graduating in Chile each year, according to the figures for 2005, there is a general situation of deficit in the universities. Figures standardized according to the population of the country show that the number of individuals who achieve

the level of doctorate is between twenty and thirty times lower than in developed countries. Public and academic policies, together with social understanding required are clearly insufficient to overcome the deficit of doctorates in the country⁽¹⁹⁾.

As we have analyzed, the evaluation of the Doctorate Program is related to the quality of research and of scientific output of the center which delivers it and this, in turn, is linked to the academic quality of the professors responsible for the activity. They should meet the criteria required by the accreditation agencies, such as the National Accreditation Commission (CNA) in Chile, according to the standard of which these academics have to show themselves

to be highly competent in leading research projects, managing national and international grants and have highly indexed publications. This situation obliges the academics who have such skills to put aside time to conduct research, and to secure the infrastructure and medium and long-term financial support. In Nursing, this has been the main obstacle to advance, as applicants have not shown themselves to be effective in securing grants and the effectiveness of the research community has been seen as limited. In Chile, in Nursing, the professor with a Doctorate shares his academic tasks and faces the same schedule of undergraduate classes, administration and interminable, multiple meetings within the University and in other institutions. The result of this is the very real deficit of professors qualified to work at postgraduate level, added to the fact that this task, which should be paramount, is often part time, and recognizing the small number of doctorates available in the area.

On the other hand, possible an influencing base factor, according to a report by the National Commission for Scientific and Technological Research - Comisión Nacional de Investigación Científica y Tecnológica (CONICYT), 2013, Nursing, in Chile, as an area of research, is still deemed small (0.8% in 2011), with some of the lowest international collaboration levels in the country (28.21% in 2011), the same trend as was shown in proportion to the output in the Q1 journal (17.95% in 2011), with the lowest normalized impact in the country, volatility in levels of excellence due to the

small size and with a high level of leadership (84.62% ,n 2011), but almost without excellence led output ⁽²⁰⁾ .

In this regard, if the current situation is compared to that of three decades ago remarkable progress can be seen, although weaknesses still persist with which it is necessary to deal. It was the College of Nurses, a union, who proposed a detailed view of research development in nursing in 1982, and in this period, one of the most significant problems connected to the lack of quality research in nursing in Chile was not only due to the lack of systematic and permanent training in research, but also the little time and scarce resources dedicated to research ⁽²¹⁾. Nowadays, although there have been improvements in research training, time is still short and the efficiency of nursing in national and international research is insufficient. Figure 2 shows research in Nursing between 1982 and 2014. Compared with almost two decades ago, for knowledge production in Nursing in Chile, relevant variables can be identified in 2014 that have been optimized and improved, such as: systematizing research training from undergraduate level onwards, increased scientific output, methodological rigor, the setting up of permanent research lines, research quality and periodical publication. However, there are still weak aspects that are impeding nursing from reaching outstanding scientific status, and it is necessary to recognize these in order to overcome them and move on to the next step in producing knowledge. It must be recognized that the raw materials to move onwards and upwards do exist.

Nursing research in Chile 1982 ⁽²¹⁾	Nursing research in Chile 2014 ⁽²²⁻²⁴⁾
-Lack of methodological rigor.	-This weakness has been overcome associated with research training, mainly through Master's and Doctoral Programs in Nursing .
-Lack of permanent and ongoing lines of research.	-Lines have focused on generating knowledge for graduate programs, also responding to health concerns.
- Lack of systematic and ongoing research preparation for nurses.	-Training in research has been strengthened in undergraduate curricula. And strengthened in postgraduate programs too.
-Lack of structured research teams and of institutions who harbor and encourage them.	-Research groups have been created closely linked to postgraduate education and in relation with practicing nurses.
-Deficiency in evaluating research quality.	-This has been corrected through publishing in indexed journals.
-Lack of nursing periodicals.	-There are 3 nursing journals in Chile, one with a scientific history and indexation
-Dissociation between research, teaching and care was reflected in the impossibility of establishing a scientific community in nursing.	-Dissociation continues and the multiplicity of tasks, primarily in academia remains, and in general there are no actual policies for re-inserting returnees with degrees.
-Lack of time and economic resources that enable research in nursing to be encouraged.	-There is support for nursing research through grants and the emerging incorporation of these organisms has been shown. It is still an area that is imperative to promote.

Figure 2 - Situation of Nursing Research in 1982 and 2014

What is lacking, as has been shown, is the lack of practicing nurses conducting research ⁽²⁵⁾. In this respect, there is currently a generation gap between current

promotions and those which came out 10 or more years ago. Is this linked to what is pointed out in Figure 2, the lack of integrated teams, disassociation between

research activities, between teaching and care, related to a lack of integration between care and teaching, the difficulty of obtaining grants for postgraduate study, the lack of permission on a practical level, the obvious product is difficulty in producing lasting research based on problems encountered in practice. It should also be pointed out that among the reasons that are seen as causes for not doing research is the lack of available infrastructure in care services, the lack of support and poor comprehension on the part of the authorities if the significance and impact of this task. Despite, all of the above, it was found that there are multi-disciplinary teams who are conducting studies, responding to the country's health problems.

Final Considerations

Awarding grants to projects is another priority to be resolved. In 2014, the directives of the International Nursing Research Center - Centro Internacional de Investigación en Enfermería (CIIENF), presented a document, with the support of the rectors of the academic units, to the national bodies responsible for awarding national funds, which set out the need not only for such an entity but also for other collegiate bodies of nursing, to form a specific study group, in other words, a specific area of knowledge. Recognizing and evaluating scientific and technological development of the discipline by the bodies responsible for handing out funds is a topic that should be recognized in such cases, and should be supported by the nursing faculties and professional and educational collegiate bodies, in a joint action. Thus, this task brings up implications for future accreditation of the programs.

The authors highlight three limitations in the academic environment which should be remedied and which, without awareness on the part of the directors of the units teaching nursing, will pose an obstacle to producing knowledge that is difficult to overcome. It lies in the ongoing disassociation, the multiplicity of tasks and the poor availability of time in the academic environment, a place in which research begins, enabling it to be linked to practice. The policies for reinserting human advanced human capital have not been the most appropriate. We can currently observe the enormous problems those who have obtained their doctorate face, continuing to deal with high economic demand in tutoring undergraduate students for their entire

teaching schedule, not providing them with the time needed to settle into their doctorate degree and go on to the projects suited to their new state. On the other hand, there is no evaluation, especially at a care level, concerning the importance of obtaining a doctorate degree which would allow them to promote quality practice in nursing through joint lecturer-care research projects. Advanced studies in Doctorate Programs should be encouraged in countries which offer grants, in order to increase the number of doctoral students coming from practicing.

From another perspective, it is worth noting that, compared with other countries, doctoral students in Chile participate little in undergraduate teaching. If universities temporarily hired their PhD students, they would enrich their teaching, help to increase training and raise the national scientific heritage.

The work is still unfinished and, to the extent that academic institutions are committed to acting together with their health care peers, with other academic, national and international institutions, especially for training through agreements with foreign entities as well as health institutions supporting and encouraging training and development, and that globally there is full conviction that this has implications for developing nursing, for health policies, quality of care and safety, then the effort that is being made will be worth it.

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