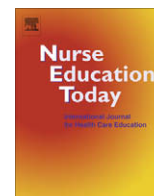




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## New nursing education structure in Spain

Adelaida Zabalegui\*, Esther Cabrera

Universitat Internacional de Catalunya, Health Science School, Josep Trueta s/n, S. Cugat del Valles, 08195 Barcelona, Spain

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### SUMMARY

Nursing education in Spain is developing rapidly in accordance with the European Union growth and within an international globalization movement. The purpose of this article is to present the new nursing education framework in Spain: A brief history together with its recent reform and developments.

Since nursing education was integrated into the university level in 1977, the only academic recognition for such an education in Spain was the three year diploma degree. Nurses had to move into other disciplines in order to achieve academic growth or advance their nursing studies abroad. Currently and in compliance with the Bologna declaration for the Higher European Education Area, nursing education in Spain is being transformed into a program which recognizes bachelor, master and doctoral degrees in this field.

In January 2005, the Spanish Government published the guidelines for the undergraduate, master's and doctoral levels, and finally, last October 2007, it established the regulations for the official university education.

The current nursing specialties in Spain include family and community health nursing, midwifery, mental health nursing, geriatric nursing, health work nursing, medical care nursing and pediatric nursing. This new nursing education structure is expected to improve health care as well as nursing reliability and autonomy.

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### Introduction

Nursing education and the nursing practice in Spain are influenced by health care changes. The most important health-related factors that have an impact on health care are: demographic changes, such as population aging; cultural diversity, such as immigration; technology growth; economical and sociopolitical globalization; increased level of patient knowledge and decision making; increased complexity of care; policies of health cost maintenance and quality of life; evidence-based practice in nursing, and advances in health and nursing science.

During the past 10 years the nursing discipline in Spain has gone through a great transformation, from a university diploma-only program to a full-scale academic education with a degree, or bachelor, master and doctoral nursing programs. Now, nurses in Spain are able to gain all the knowledge, attitudes and skills required to effectively cope with present health care challenges and changes. Recently (October, 2007), the Spanish Government recognized nursing as a science in its own right, and gave to our profession a full academic pathway within the European framework of the Bologna agreement of a bachelor, master and doctoral education (Boletín Oficial del Estado, BOE No. 260, 2007).

### Historical review of nursing education in Spain

The first Spanish Nursing School, Santa Isabel de Hungria, was created in 1898 with a religious and technical orientation. Later on, in 1917 another School of Nursing, Santa Madrona, was created in Barcelona with a focus on biology and techniques. In 1933, the Government of Catalonia created its own School of Nursing outside the religious domain, and nursing at that time was considered a health occupation devoted to the care of the sick. Later on, in 1944 a law was passed stating that nurses were subordinate to medical personnel, thus relegating to nurses a dependent role. In 1953, the three different programs for nursing professionals: nurses, midwives and health practitioners were unified under a single title "Assistant Health Technicians" or *Ayudantes Tecnicos Sanitarios* (ATS). These new professionals, ATS, had a great impact in the development of the public health care system in the 1960s that generated new hospitals and therefore a need for more nurses and new nursing schools. ATS were educated outside the universities, mainly in hospital schools of nursing. The focus of the ATS nurses was on hospital care rather than on community care. Their main emphasis was a technical care that was not scientifically oriented. ATS had no professional identity and autonomy since they were subordinate to other health professionals, mainly physicians. Their care was based on a positivistic medical approach, which lacked the holistic perspective of nursing.

Since the early seventies different groups of nurses, influenced by international nursing movements, especially from USA and

\* Corresponding author. Tel.: +34 935042000; fax: +34 935042001.  
E-mail address: [azabaleg@csc.uic.es](mailto:azabaleg@csc.uic.es) (A. Zabalegui).

Canada, started working towards the development of nursing as a discipline. During this period, the Spanish General Education Law (BOE 2128, 1977), which was passed on July 1977, allowed the integration of nursing studies into the University system, giving them the category of Nursing School and offering a diploma program. This diploma was issued by the Ministry of Education, and the requirements for admission were high school accreditation (12 years of formal pre-university education) and a national university entrance examination called “*Selectividad*”.

The general functions of the diploma nurse were to provide general nursing care for healthy or sick persons, families and communities, with a focus on care towards health promotion, disease prevention, health recovery and rehabilitation (General Health Law, 1986). In addition, nurses were expected to collaborate with other health care professionals and to contribute to student nursing education. Following the instructions of the European Union (EU) Advisory Committee on Training Nurses, a minimum of 4600 h of theory and training or three years of education was required to work as a nurse in the EU countries (Council Directives for Nurses, 1977). This directive is still active. Although the number of hours is not a good indicator of goal achievement, this timeframe was established for the diploma program to satisfy the requirements of European Directives. Moreover, it was established that clinical education would occupy 50% of the hours of the program (Zabalegui, 1999). The rationale for maintaining this proportion was to ensure sufficient clinical training so that the students would incorporate the theoretical knowledge into practice, and at the same acquire the necessary attitudes and skills by direct observation and repetition. This approach put an emphasis on professionalism. Although, it can be said that, in general, the contents have maintained the original philosophy, since 1977 nursing curricula have evolved and changed to adjust to the new social and university demands. The main change was undertaken in 1990 to incorporate the recommendation of the Alma Ata Conference (1978), which emphasized contents of primary health care, geriatric nursing and behavioral science (BOE 1466/1990).

Until now, nurses in Spain have been unable to acquire a doctoral degree in nursing. Nursing faculty were forced to obtain their bachelor and doctorate degrees in disciplines other than nursing (e.g. psychology, sociology, anthropology) or to enroll in universities abroad.

### Recent transformation of nursing education in Spain

The biggest change in Spanish Nursing Education has arisen from the Bologna Declaration signed by the EU Ministries of Education on June 19, 1999 to re-structure university education (Zabalegui, 2006). This agreement describes the framework of the European Higher Education Area (1999) and defines the following objectives to be reached by October 1st 2010:

1. Adoption of a system of easily readable and comparable degrees.
2. Adoption of a system based on two main cycles: undergraduate (degree) and graduate (master and doctorate).
3. Establishment of a common system of credits “European Credits Transfer System (ECTS)” to promote student mobility.
4. Promotion of mobility for students, teachers, researchers and administrative staff.
5. Promotion of European co-operation in quality assurance with a view to developing comparable criteria and methodologies.
6. Promotion of the necessary dimensions in higher education, particularly with regards to curriculum development, inter-institutional co-operation, mobility schemes and integrated programs of study, training and research.

Currently, nursing programs are undergoing a great transformation on several levels: from a governmental mandatory structure, subjects credits load and content common for all programs to open and varied university proposals that are accredited by the government; from a biomedical model to a nursing paradigm; from professor-centered teaching to student-centered learning; from a lecture-based classes to active cooperative and problem solving-based learning; from curricular subjects and grades to assessed competencies as learning outcomes; from a diploma to a bachelor's degree; from a minimum of 205 credits (1 credit representing 10 h of classroom teaching or 15 h of seminars or 35 h of clinical practice) to a 240 European Credits Transfer System, ECTS (1 credit representing between 25 and 30 h of student work that includes classroom teaching and other leaning activities). In Spain, there are about 130 nursing schools and these transformations are being piloted with Governmental support in a few Universities, such as the Universitat Internacional de Catalunya (UIC) in Barcelona and the University of Girona.

The new university structure for nursing education includes different levels (Royal Decree 1393/2007) beginning with the nursing basic education or degree (diploma), granted by the Ministry of Education, followed by the bachelor's degree (four fulltime academic years with 240 ECTS credits at 60 ECTS per year). The next level is the Master program, like the Master of Nursing Science, granted by the Ministry of Education (1 or 2 academic years with 60 or 120 ECTS). Finally the last level is the doctoral program, granted by the Ministry of Education as well. There is also the opportunity to be enrolled in different specialties; however, at the moment, there are only two specialties accredited by the Ministry of Health. Midwifery, approved in 1992, is a program of two full time years with a total of 3534 h theoretical and practical experience, and mental health nursing approved in 1999 with one year of clinical practice. Access to these two specialties is through a national examination, a system similar to that used by medical residents. Each Spanish Autonomous Community negotiates with the Ministry of Health the number of positions available every year. Out of the 15,000 new nursing graduates every year from the basic program, only about 300 may undertake one of these two specialties. Recently, five more specialties (family and community health nursing, geriatric nursing, health work nursing, medical surgical nursing, and pediatric nursing) have been approved by our Government. So far these new specialties have not been offered because they are under study in terms of curriculum development, number of specialists needed, places offered, teaching units, employment outcomes, and so on. Moreover, no nursing specialty has any academic credentials, and are therefore not recognized as master's degrees (BOE 44/2003 and BOE 450/2005).

In Spain, post graduate continuing education consists in many post diploma course in all types of specific nursing areas (oncology, cardiology, surgical, intensive care, nutrition, palliative nursing care), or child development or nursing management. This type of education is certificated by the organization that offers it (university, hospital or a nursing association) and does not have governmental accreditation (Fig. 1).

### Graduate nursing education

The royal decree published on January 21, 2005 (BOE, 55/2005) has established the structure of official university education for the graduate level or degree. Based on this framework, all nursing schools ( $N = 109$ ) created a network for degree or bachelor in their nursing science curriculum development. This network had the support of the Conference of Nursing School Directors and received a grant from the Ministry of Education (National Agency of Academic Quality Evaluation, ANECA) (Ministry of Education, 2005).

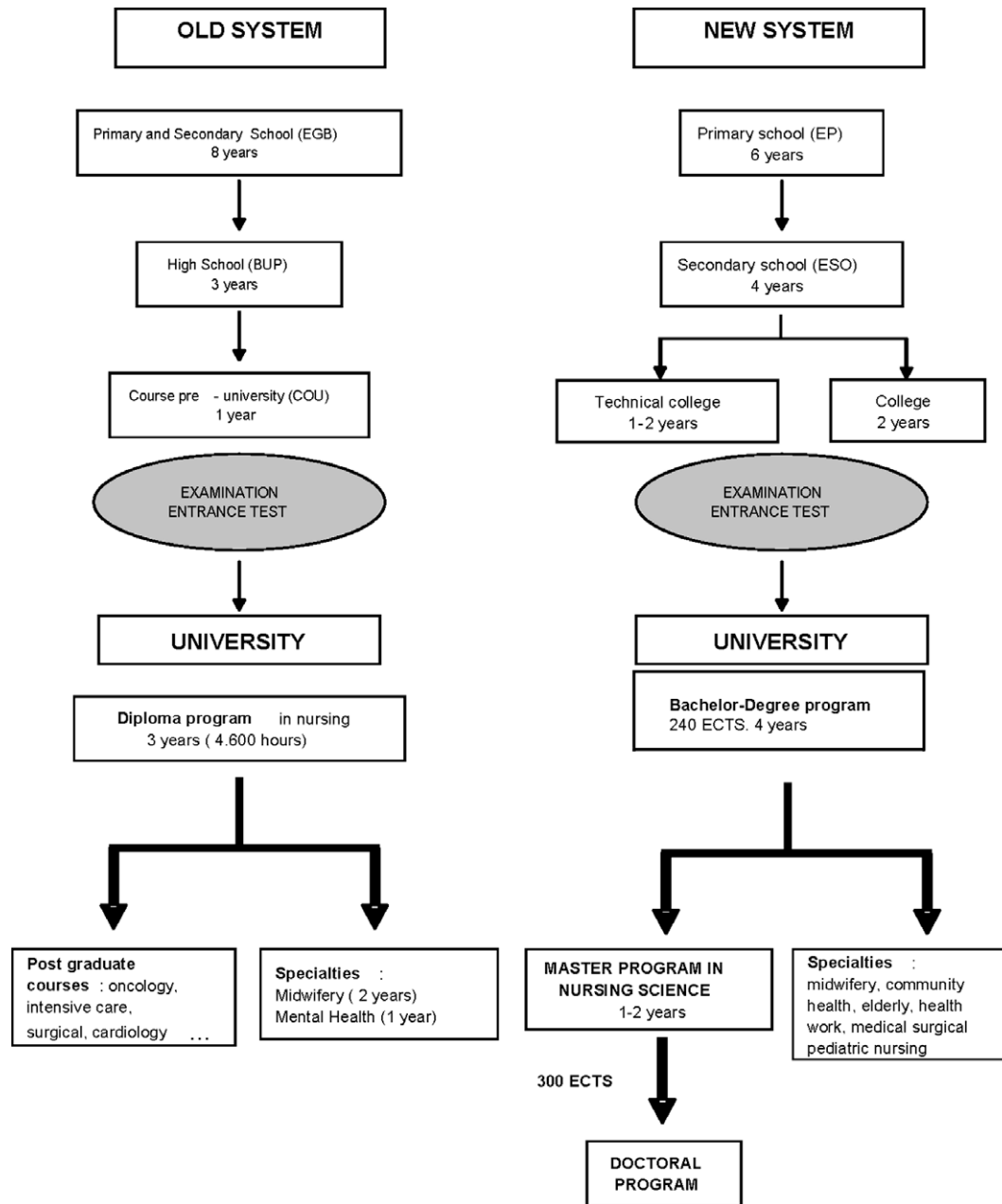


Fig. 1. New nursing education structure vs old structure.

The network research was done in three phases. First, an analysis of nursing studies in all EU countries was done to identify the number of years, hours, and ECTS required, the type of academic institution where the studies were implemented, and the degree awarded upon graduation. Second, the network carried out an analysis on the demand for nursing studies in Spain, evaluated the number of enrollees in each nursing school and the number of applicants. This second phase also included a national nursing survey to determine the level of employment satisfaction.

The third phase of the study was the evaluation of generic and specific competencies needed for graduation at the bachelor's or degree level. Based on previous results about nursing competencies from the *Nursing Tuning Project financed by EU (2005)*, this analysis was done with a national survey ( $N = 2105$ ) on nurses with 5–10 years of clinical experience (48%), teachers (32.6%), employees (16.2%), and others nurse professionals (3.1%). Participants had to rate each competency from 1 (not important), 2 (important),

3 (quite important) and 4 (very important). The competencies required for each course were identified and defined. Thirty generic competencies were identified (e.g. analysis and synthesis, team work, problem solving and decision making, critical thinking, etc.) and 40 specific nursing competencies were classified in six categories: professional values and roles; practice and clinical decision making; skills, interventions and activities to provide optimum health care; interpersonal and communication; leadership, administration–management. Finally, the results of this study were reported to the Spanish Government and included the recommended degree program curriculum, including its objectives, teaching strategies, structure of mandatory courses, and number of ECTS.

The bachelor or degree program is being piloted in a few universities, such as the UIC, and its curriculum could be implemented as early as September 2008 with a minimum 240 ECTS distributed in the following way (BOE, 2007):

- (a) A minimum of 60 ECTS of basic education. Thirty-six of those 60 ECTS must be from a related health sciences (human anatomy, biology, biochemistry, statistics, physics, physiology or psychology). The remaining 24 credits could be from the same branch of knowledge or from other basic sciences (e.g. mathematics), social sciences (e.g. anthropology, communication, economy, history, sociology, etc.), arts and humanities (e.g. ethics, modern language, philosophy, etc.) and engineering and architecture (e.g. computer science, etc.). Besides these areas, each subject has to have a minimum of six credits ECTS. These credits will be generally included in the first or second academic year and will vary among universities.
- (b) Hundred and five ECTS proposed by each university within its own curriculum objectives and students' competencies to be completed at the end of the degree program. These credits will be focused on nursing sciences based on the curriculum of each university. The nursing network recommended the following distribution of these credits: fundamentals of nursing, clinical nursing (10), psychosocial and mental health nursing (9), community nursing (20), nursing along the life cycle (15), nursing ethics, legislation and administration (5), and other nursing related subjects (6). These subjects will include nursing theory and nurse training and will be completed mainly in the second and third academic years.
- (c) Clinical training (60 ECTS maximum in general, although a minimum of 90 ECTS is necessary for a degree in nursing to comply with the European Directive). The clinical component has to be distributed progressively along the curriculum with more credits taken during the third and fourth academic years.
- (d) Final degree project (6–30 ECTS). This work is to be done at the end of the program with the purpose of evaluating the students' acquired competencies.

Once the student finishes the basic university program, the nurse automatically obtains a nursing license, which allows him or her to practice in Spain as well as in the EU. There are no licensure national exams or further continuing education requirements since no relicensing policy has been established. However, 60% of the almost 200,000 diploma nurses are participating in continuing education programs. A possible explanation to the high level of enrollment in these programs is that nurses feel the need to further their education to enhance their curriculum vitae and provide a more qualified and excellent professional practice.

### Postgraduate master and doctoral in nursing sciences program

Nursing as a higher education discipline is finally being recognized and its curriculum is organized within the new framework of reference for the bachelor, master and doctoral degrees (Royal Decree, 56/2005). The first official master's degree course in nursing sciences is an officially recognized inter-university program given by a network of eight universities in Spain and one in Belgium (The Catholic University of Leuven) and began offering the program in September, 2006. Its aim is to train researchers and specialists in nursing sciences to carry out research into the physical, social, cultural, political and psychological aspects of care within the context of the health/illness of individuals, families and communities and dynamics of the different healthcare systems.

Since 1998 the Universities of Alicante, International of Catalonia, Huelva, Almeria, Rovira i Virgili of Tarragona, Autonoma of Madrid, Lleida and Zaragoza and have been offering an advanced nursing program as a second cycle post graduate education. The

program focuses on nursing research, teaching, management and advanced care. More than 1500 Spanish nurses have completed this program. Some of these students on graduation have assumed faculty and administrative roles across the country. Once the program was approved by our government (BOE, 2006), some of these students have enrolled in doctoral nursing programs. This inter-university network agreed upon the objectives of the master in nursing science program; these objectives include the following: (a) to develop and analyze the historical, theoretical and philosophical bases of nursing science, (b) to develop teaching programs for all nursing areas of knowledge, (c) to apply the scientific method to increase nursing body of knowledge and to solve health-related problems of individuals, families and communities, (d) to assume nursing leadership to manage resources and promote the advancement in the professional development of nursing, and finally and (e) to gain new scientific and technological knowledge necessary to cope with health care demands.

The program's ultimate objective is to offer training that prepares the ground for adapting healthcare services and quality of life to the 21st century. It is also designed to provide new theoretical and methodological healthcare tools in this changing, complex society, while contributing to improve people's health and quality of life in all its dimensions. Upon completion of this official Master's degree course, students are qualified to submit a thesis for a doctoral degree (Table 1).

Recently, these eight universities mentioned above have signed an agreement creating a network for inter-university co-operation in nursing research, teaching and student exchange. This network hopes to incorporate other Universities from EU countries to enhance student outcomes and to implement future and collaborative doctoral programs. Some of the research areas included in this program are: oncology care (stress, coping, adaptation and cancer prevention); quality of life; ageing; self-care; caregivers; dependence; educational methodologies (cooperative learning); gender and health and organizational cultures in hospitals.

**Table 1**  
Common subjects for the inter-university master's in nursing science program.

No.	Title group	Contents	European credits (ECTS)	Total ECTS
1.	Advanced nursing			38.5
		Theory and models	10	
		Bioethics I	2.5	
		Care and health requirements	15	
		Society and health	5	
		Health psychology	6	
2.	Management			11
		Health economics	5	
		Management of health and social health care	6	
3.	Research			22
		Research methodology I	10	
		Research methodology II	10	
		Bioethics II	2	
4.	Teaching			8.5
		Education methodology	8.5	
5.	Compulsory subjects			25
		Technical English, research project...		
6.	Electives			15
		Research areas of each university <sup>a</sup>		

<sup>a</sup> To facilitate student mobility, each university offers at least two online electives every semester.

### Doctoral program

To enter into a doctoral program the candidate has to have a minimum of 300 ECTS with at least 60 credits from an official master's program. This program may have courses and the doctoral candidate has to publicly present his or her research work. Therefore, the doctoral programs include research lines supported by consolidated groups of researchers. Furthermore, the new academic structure proposes the option of obtaining a European Doctorate accreditation. This type of doctoral program requires the PhD candidate to meet the following criteria:

- At least three months of his or her research work completed in other EU country.
- Two positive references letters from other EU countries doctors.
- One member of the dissertation committee has to be from another EU country.
- A part of the dissertation defense has to be done in an official language of another EU country.

### Nursing professors education

Nursing teachers should be the leaders in making decisions about the future of the profession, planning new education, and implementing innovations based on their nursing research. In order to do these nursing teachers should have a higher education level, at least a master's degree. In Spain, many nursing faculty members are moving from a diploma to a bachelor and doctoral degree. Until now the only requirement to be a nursing teacher in the basic program has been to have a diploma in nursing; however the new university structure requires that 50% of the teachers should have a doctoral degree. Therefore, many nursing school teachers are now taking their doctoral courses, and nursing schools are at risk of losing their nursing staff.

In order to have a teaching position at the university, the candidates must pass an oral examination where curriculum vitae and academic degree are key aspects. If nurses do not have doctoral degrees the teaching position could be given to other professionals with these academic credentials. The teacher selection process is also being evaluated against criteria for the impact factor of bioscience publications, among which most nursing journals are not included. Therefore, this new university structure brings a great opportunity for nursing development, but at the same time poses a great challenge in terms of nursing school control.

To face the challenges of the new nursing academic levels we must further consider the nursing student profile and global nursing mobility. Today, there is an increasing diversity in nursing student population. Students enter into university at the age of 18, although there is an increase in the number of mature students. This new population is characterized by more males (13%), older females, students transferred from other sciences, self-paid tuition

costs, therefore combining the studies with work and family roles. Moreover, every year some of our nursing students do some of their coursework in other EU universities while we receive students from other European universities as part of the Erasmus programs that promote university student mobility.

### Conclusion

Nursing education in Spain is being upgraded to international standards by:

- Implementing a 4-year bachelor's degree (240 ECTS).
- Implementing a 1 or 2 academic year master's in nursing science (60–120 ECTS).
- Implementing doctoral nursing programs.
- Developing specialist education programs.
- Developing collaborative inter-university agreements within Spain and the EU.

These transformations are contributing to nursing in Spain as an independent discipline, with its own identity and self sufficiency. This new structure for higher education in Spain should enhance Spanish nursing competitiveness and promote the roles and influence of nurses on the health status of individuals, families, and communities in Spain.

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