

## HISTORICAL RESEARCH ARTICLE

## Education/training in rehabilitation nursing in Portugal since 2006

*A formação em enfermagem de reabilitação em Portugal desde 2006*

*La formación en enfermería de rehabilitación en Portugal desde 2006*

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### Abstract

**Background:** Since the beginning of the 21<sup>st</sup> century, fertility rates have decreased and life expectancy has increased, with more people with disabilities and dependent on others requiring more specialized nursing care.

**Objective:** To describe the evolution of education/training in rehabilitation nursing.

**Methodology:** Documental search conducted in the Portuguese official journal (*Diário da República*), with hermeneutic analysis and interpretation of the sources on the specialty of rehabilitation nursing since 2006.

**Results:** Several curricula of postgraduate specialization and master's degrees in rehabilitation nursing have been approved since 2006. Several course units were gradually integrated into the curricula, such as Statistical Epidemiology and Demography, Psychosocial Aspects of Disability, Health Care Policies and Models, and Internships in Rehabilitation Nursing Care for People with Cancer and at the End of Life.

**Conclusion:** Education/training in rehabilitation nursing evolved under the influence of political and socio-demographic changes. With the technological and scientific advances and the evolution of health systems, rehabilitation nursing care has evolved in terms of innovation and education/training within a legal framework and based on specific competencies.

**Keywords:** nursing; history of nursing; rehabilitation nursing; education, nursing

### Resumo

**Enquadramento:** Desde o início do século que se verifica uma diminuição da natalidade e maior envelhecimento populacional, existindo mais pessoas com incapacidade e dependência, exigindo cuidados de enfermagem mais especializados.

**Objetivo:** Descrever a evolução na formação da especialidade em enfermagem de reabilitação.

**Metodologia:** Recolha documental no Diário da República, com análise e interpretação hermenêutica das fontes com referência à especialidade de enfermagem de reabilitação, publicadas desde 2006.

**Resultados:** Foram aprovados vários planos de estudo de pós-licenciatura de especialização e mestrado em enfermagem de reabilitação.

Progressivamente, houve inclusão de unidades curriculares como Epidemiologia Estatística e Demografia, Aspectos Psicossociais da Incapacidade, Políticas e Modelos de Cuidados de Saúde e Estágios de Cuidados de Enfermagem de Reabilitação à Pessoa com Problemas Oncológicos e em Fim de Vida.

**Conclusão:** A formação em enfermagem de reabilitação desenvolveu-se com influência das alterações políticas e sociodemográficas.

Com os avanços tecnológicos, científicos e a evolução dos sistemas de saúde, os cuidados de enfermagem de reabilitação têm evoluído na inovação e formação, com enquadramento legal e nas competências específicas.

**Palavras-chave:** enfermagem; história da enfermagem; enfermagem em reabilitação; educação em enfermagem

### Resumen

**Marco contextual:** Desde principios de siglo se ha producido un descenso de la natalidad y un mayor envejecimiento de la población, con más personas con discapacidad y dependencia, que requieren más cuidados especializados de enfermería.

**Objetivo:** Describir la evolución en la formación de la especialidad en enfermería de rehabilitación.

**Metodología:** Recopilación documental en el Diario de la República, con análisis e interpretación hermenéutica de las fuentes con referencia a la especialidad de enfermería de rehabilitación, publicadas desde 2006.

**Resultados:** Se aprobaron varios planes de estudio de posgrado de especialización y máster en enfermería de rehabilitación. Progresivamente, se incluyeron unidades curriculares, como Epidemiología Estadística y Demografía, Aspectos Psicossociales de la Discapacidad, Políticas y Modelos de Atención Sanitaria y Prácticas de Atención de Enfermería de Rehabilitación a la Persona con Problemas Oncológicos y al Final de la Vida.

**Conclusión:** La formación en enfermería de rehabilitación ha evolucionado con la influencia de los cambios políticos y sociodemográficos. Con los avances tecnológicos y científicos, así como con la evolución de los sistemas sanitarios, los cuidados de enfermería de rehabilitación han evolucionado en innovación y formación, con marcos legales y competencias específicas.

**Palabras clave:** enfermería; historia de la enfermería; enfermería en rehabilitación; educación en enfermería

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## Introduction

Research is a systematic and rational process of knowledge development. According to Ferreira (2013, p. 154): “. . . Historical Research in Nursing constitutes the search for foundations that help support the current history of the profession, building solid bases for the future”.

In Portugal, rehabilitation nursing (RN) evolved tremendously in the 1950s and 1960s, gaining visibility mainly after the construction of the Rehabilitation Medicine Center of Alcoitão in 1964 (Correia et al., 2021). Since then, the quality of care, particularly RN care, has increased exponentially in Portugal.

The paradigm shift in recent decades has contributed to the progressive development of RN, which was initially associated with care needs arising from war conflicts and the prevention of complications. The current paradigm is different, given the decrease in fertility rates and the increase in average life expectancy, contributing to population aging. The high life expectancy in Portugal seems to reflect “. . . the improvement in the health status of the Portuguese citizens in the last 40 years” (Decreto-Lei n.º 101/2006 do Ministério da Saúde, p. 3856). However, there are more and more people with some degree of disability requiring special care.

Against this background, rehabilitation nurses (RNs) play an increasingly important role in the adaptation of Portuguese society and population. They are essential in maintaining and promoting individual autonomy and are even starting to play an increasingly relevant role in providing rehabilitation care to patients at the end of life, assuming functions “. . . throughout the life cycle, in all care settings” (Regulamento n.º 125/2011 da Ordem dos Enfermeiros, p. 8656).

With the aging index increasing since 1961 (Fundação Francisco Manuel dos Santos, 2020), new social and health needs have emerged, especially in the first half of the 21st century, that deserve special attention:

. . . require new and diversified responses to meet the expected increase in demand by older people with functional dependency, patients with multiple chronic conditions, and people with advanced incurable diseases and at the end of life. (Decreto-Lei n.º 101/2006 do Ministério da Saúde, p. 3856)

These societal changes are increasingly evident, and “between 1960 and 2004, the older population in Portugal doubled in absolute values and is expected to represent approximately 32% of the total population by 2050” (Regulamento n.º 350/2015 da Ordem dos Enfermeiros, p. 16655).

Another vital aspect to be taken into account is that “. . . the advancement of technology and knowledge in the health area leads to more and more people surviving life-threatening injuries (e.g., road traffic and workplace accidents) and people with chronic diseases living longer” (Regulamento n.º 350/2015 da Ordem dos Enfermeiros, p. 16655). Therefore, RNs are increasingly requested as a complement to meet the population’s needs.

These new needs have caused several changes in health policies and professional training, demanding new res-

ponses to maintain and recover functional capacity and quality of life.

These changes have had an impact on RN education/training over time. The first major change occurred in 1988 with the creation of courses of specialized higher education ( *cursos de estudos superiores especializados* - CESE). The Portuguese government was more aware of the need to allocate specific funds for training health professionals, particularly in rehabilitation care (Correia et al., 2021). The different school cultures lead to the heterogeneity of the CESE curricula. Nevertheless, in 2002, with the publication of the Ministry of Education’s Ordinance No. 268/2002 and the transition to postgraduate specialization degrees, these curricula became more specialized, with course units (CUs) such as Research or Leadership (Correia et al., 2021). Due to the changes in socio-demographic characteristics, health policies, and health systems, contents related to other areas of health sciences, social sciences, and psychology started being included in the curricula to complement training.

Therefore, it is crucial to understand how education/training evolved with the implementation of postgraduate specialization degrees.

This study aimed to describe the evolution of education/training in the RN specialty from 2006 to the present day, considering the political and socio-demographic changes in Portugal, as well as the changes in curricula contents.

## Methodology

This study used narrative and descriptive historical methods. In the first phase, a documental search was conducted in the database of the Portuguese Parliament ( *Assembleia da República*) between September 2021 and October 2021. The following descriptors were used:  *enfermagem* (nursing),  *ER* (rehabilitation nursing),  *reabilitação* (rehabilitation), and  *educação em enfermagem* (nursing education). Two independent researchers analyzed a total of 1,028 documents. In case of disagreement, doubts were clarified through discussion or with a third reviewer. The documents were categorized based on the relevance of the sources to this study (Filho et al., 2015).

Only ordinances and decree-laws referring to the RN specialty published in the Official Portuguese Journal ( *Diário da República* - DR) between 2006 and 2021 were considered for inclusion. The exclusion criteria were documents related to public competitions for RNs, documents related to appointments to public positions, opinions, and documents published outside the timeframe of this study.

The year 2006 was chosen to start the search because it corresponds to the approval of the curricula of the postgraduate specialization degrees in RN in the three main nursing schools: Porto, Lisbon, and Coimbra (Correia et al., 2021).

The year 2021 was chosen to end the search because it corresponds to the year when the Portuguese nursing regulator ( *Ordem dos Enfermeiros* - OE) issued Notice no. 3915/2021 on the curricula of the master’s degree

for development of the specific competencies of RNs. This study also included: the Ministry of Health's Decree-Law no. 101/2006, creating the National Network of Integrated Long-Term Care (*Rede Nacional de Cuidados Continuados Integrados - RNCCI*); Order no. 10711/2006 (2nd Series), creating the North Rehabilitation Centre (*Centro de Reabilitação do Norte - CRN*); OE Regulation no. 125/2011, establishing the specific competencies of RNs; Decree-Law No. 127/2015, making the sixth amendment to the Ministry of Health's Decree-Law No. 233/2005, of 29 December, integrating the Local Health Units (*Unidades Locais de Saúde - ULS*), EPE in its scope; Regulation 350/2015, establishing the Quality Standards of Specialized RN Care; Regulation 743/2019, establishing the Standard for the Calculation of Safe Nurse Staffing; and Notice 3915/2021, establishing the curricula of the master's degree in RN. These documents were crucial for developing and affirming RN as a specialty. The second phase of this study consisted of a hermeneutic analysis and interpretation of the collected sources, with a narrative historical and descriptive synthesis of the primary outcomes of interest.

## Results and discussion

After the documental search in the Portuguese Parliament database, 45 documents were included in the final sample (listed in chronological order in Table 1), including Ordinances and Decree-Laws published between 2006 and 2021.

The approval of the General Regulation of the Postgraduate Nursing Specialization (Portaria n.º 268/2002 do Ministério da Educação) was a significant milestone for the development of rehabilitation nursing. This document clearly states that these programs aim to ensure the acquisition of scientific, technical, human, and cultural

skills appropriate to this specialty (Correia et al., 2021). In 2004, two years after the regulation mentioned above, several postgraduate degrees in RN started to emerge with similar curricula.

In this context, the Portuguese government played a part not only in the evolution of the health systems (creation of the RNCCI, CRN, and ULS) but also in professional training by authorizing and legally approving several specialization degrees in RN.

The creation of the RNCCI, through the Ministry of Health's Decree-Law no. 101/2006, improved the response to health needs for which there was not yet a systematized solution. It emphasized, among other aspects, the need for assessing, supporting, and providing RN care at home so that patients can "recover from the disabilities caused by the evolution of chronic diseases or accidents through rehabilitation and care at home, respecting the full participation of patients and their families. . ." (Decreto Legislativo Regional n.º 9/2007/M da Assembleia Legislativa, p. 1609).

In turn, the creation of the CRN (Despacho n.º 10711/2006 do Ministério da Saúde) responded to fundamental needs related to the rehabilitation process in the north of Portugal, which, at the time, did not have enough structures or professionals to provide specialized RN care.

The creation of the CRN also contributed to improving continuous training and research, namely the training of RNs, accompanying the creation of specialization degrees and establishing the conditions for internships and clinical rotations.

By 2015, eight ULS had been built ". . . to improve the interconnection between primary health care and differentiated health care . . . prioritizing health promotion, diagnosis, treatment, and rehabilitation" (Decreto-Lei n.º 233/2005 do Ministério da Saúde, p. 542), with RNs playing a leading role in these aspects.

**Table 1**

*Documental sources included in the sample*

Title	Author	Summary	Year
Ordinance No. 321/2006	Ministry of Science, Technology and Higher Education	Creates the postgraduate specialization degree in RN at the Nursing School of Viana do Castelo of the Polytechnic Institute of Viana do Castelo and approves its curriculum	2006
Order No. 10711/2006 (2nd Series)	Ministry of Health	Approves the creation of a CRN working group to prepare a functional program for creating the rehabilitation center of the North	2006
Decree-Law No. 101/2006	Ministry of Health	Creates the RNCCI	2006
Decree-Law No. 163/2006	Ministry of Labor and Social Security	Establishes the conditions of accessibility to be met in the design and construction of public spaces, collective equipment, and public buildings and housing	2006
Regional Legislative Decree No. 9/2007/M	Legislative Assembly of the Autonomous Region of Madeira	Creates the network of integrated long-term care in Madeira	2007

Ordinance No. 404/2007	Ministry of Science, Technology and Higher Education	Authorizes the postgraduate specialization degree in RN at the School of Health of Vale do Ave of the North Polytechnic Institute of Health and approves its curriculum	2007
Ordinance No. 405/2007	Ministry of Science, Technology and Higher Education	Authorizes the postgraduate specialization degree in RN at the School of Nursing São Francisco das Misericórdias and approves its curriculum	2007
Ordinance No. 784/2007	Ministry of Science, Technology and Higher Education	Authorizes the postgraduate specialization degree in RN at the Portuguese Red Cross School of Health and approves its curriculum	2007
Ordinance No. 100/2008	Ministry of Science, Technology and Higher Education	Creates the postgraduate specialization degree in RN at the Calouste Gulbenkian School of Nursing of the University of Minho and approves its curriculum	2008
Ordinance No. 325/2008	Ministry of Science, Technology and Higher Education	Authorizes the postgraduate specialization degree in RN at the Nursing School Dr. José Timóteo Montalvão and approves its curriculum	2008
Ordinance No. 330/2008	Ministry of Science, Technology, and Higher Education	Authorizes the postgraduate specialization degree in RN at the Atlântica Health School of Atlântica University and approves its curriculum	2008
Ordinance No. 1380/2008	Ministry of Science, Technology, and Higher Education	Authorizes the postgraduate specialization degree in RN at the Nursing School of the Portuguese Red Cross of Oliveira de Azeméis and approves its curriculum	2008
Ordinance No. 1446/2008	Ministry of Science, Technology, and Higher Education	Creates the postgraduate specialization degree in RN at the School of Health of the Polytechnic Institute of Bragança and approves its curriculum	2008
Ordinance No. 246/2009	Ministry of Science, Technology, and Higher Education	Creates the postgraduate specialization degree in RN at the School of Health of the Polytechnic Institute of Santarém and approves its curriculum	2009
Ordinance No. 309/2009	Ministry of Science, Technology and Higher Education	Creates the postgraduate specialization degree in RN at the São João de Deus School of Nursing of the University of Évora and approves its curriculum	2009
Order No. 9976/2009	Nursing School of Porto	Adequacy of the curriculum and contents of the postgraduate specialization degree in RN	2009
Order No. 19671/2009	Polytechnic Institute of Viseu	Description of the master's degree in Nursing and Rehabilitation and its curriculum	2009
Order No. 18144/2009	Nursing School of Porto	Changes to the curriculum of the postgraduate specialization degree in RN	2009
Order No. 19997/2009	Nursing School of Coimbra	Description of the master's degree in Nursing and Rehabilitation and its curriculum	2009
Notice No. 5398/2010	Cooperativa de Ensino Superior Politécnico e Universitário (CESPU), CRL	Curriculum of the cycle of studies leading to the master's degree in RN offered at the Vale do Sousa School of Health - North Polytechnic Institute of Health	2010
Regulation No. 125/2011	Ordem dos Enfermeiros	Establishes the RNs' profile of specific competencies	2011
Order No. 15679/2011	Polytechnic Institute of Viana do Castelo	Curriculum of the study cycle leading to the master's degree in RN of the School of Health of the Polytechnic Institute of Viana do Castelo	2011
Corrigendum No. 230/2012	Nursing School of Porto	Changes to the curriculum of the master's degree in RN	2012
Order No. 13718/2012	Polytechnic Institute of Viseu	Changes to the curriculum of the postgraduate specialization degree in Nursing - RN	2012
Order No. 7421/2013	Nursing School of Porto	Republication of the curriculum and contents of the postgraduate specialization degree in RN	2013
Corrigendum No. 883/2013	Nursing School of Lisbon	Changes to the curriculum of the postgraduate specialization degree in RN	2013
Order No. 2141/2014	Polytechnic Institute of Bragança	Makes public that the curriculum obtained a favorable opinion from the Ordem dos Enfermeiros on 7 November 2013	2014
Order No. 10589/2014	Nursing School of Coimbra	Changes to the curriculum of the master's degree in RN	2014

Order No. 14408/2014	Polytechnic Institute of Viana do Castelo	Publishes the approval of the changes to the curriculum of the postgraduate specialization degree in RN at the School of Health of the Polytechnic Institute of Viana do Castelo	2014
Regulation No. 533/2014	Ordem dos Enfermeiros	Standards for calculating safe nurse staffing	2014
Decree-Law No. 12/2015	Ministry of Health	Sixth amendment to Decree-Law no. 233/2005 of the Ministry of Health, of 29 December, integrating Local Health Units, EPE, in its scope	2015
Regulation No. 350/2015	Ordem dos Enfermeiros	Regulation of the Quality Standards of Specialized RN Care	2015
Ordinance No. 97/2016	Ministry of Science, Technology and Higher Education	First amendment to Ordinance no. 784/2007	2016
Notice No. 5622/2016	University of Évora	Publication of the curriculum of the master's degree in nursing at the University of Évora	2016
Ordinance No. 127/2016	Ministry of Science, Technology and Higher Education	Authorizes the postgraduate specialization degree in RN at the Santa Maria School of Nursing	2016
Order No. 9723/2016	Nursing School of Coimbra	Curriculum of the master's degree in RN	2016
Ordinance No. 252/2016	Ministry of Health	Creates the Working Group for Analysis of Outpatient Physical Medicine and Rehabilitation, with the mission to submit proposals for greater internalization of care	2016
Ordinance No. 374/2017	Ministry of Science, Technology and Higher Education	Changes the curriculum of the postgraduate degree in RN of the School of Health of Vale do Ave of the North Polytechnic Institute of Health	2017
Order No. 11467/2017	Nursing School of São José de Cluny	Curriculum of the master's degree in RN to be taught in association by the Nursing School of São José de Cluny, Santa Maria School of Health, and Nursing School Dr. José Timóteo Montalvão Machado	2017
Order No. 7772/2018	Polytechnic Institute of Viana do Castelo	Publishes the approval of changes to the curriculum of the study cycle leading to the master's degree in RN, taught at the School of Health of the Polytechnic Institute of Viana do Castelo	2018
Regulation No. 140/2019	Ordem dos Enfermeiros	Regulation of the Common Competencies of the Specialist Nurse	2019
Order No. 3917/2019	Nursing School of Porto	Changes to the curriculum of the master's degree in RN	2019
Ordinance No. 315/2019	Nursing School of Porto	Changes to the curriculum of the postgraduate specialization degree in RN	2019
Regulation No. 743/2019	Ordem dos Enfermeiros	Regulation of the Standard for Calculation of Safe Nurse Staffing	2019
Notice No. 3915/2021	Ordem dos Enfermeiros	Training program that integrates the study cycle of the master's degree aimed at the development of RN's specific competencies	2021

*Note.* RN = Rehabilitation Nursing; CRN = North Rehabilitation Center; RNCCI = National Network of Integrated Long-Term Care.

Since the approval of the Ministry of Education's Ordinance No. 268/2002, the various curricula have common areas, with theoretical and practical classes. However, there are some important differences.

The analysis of Ordinance No. 321/2006 shows that the curriculum of the postgraduate specialization degree in RN of the Nursing School of Viana do Castelo has included, from an early stage, seminars on several topics, such as Anthropology of the body, Clinical management and supervision, Research, Ethics, Citizenship of people with disabilities, and Stress management. These themes result from an increasingly urgent response to care needs in these areas. It should also be mentioned that one of the internships in this curriculum is Rehabilitation in the community, considering not only the continuity of RN care but also early disease prevention and health promotion.

Later, with Order No. 15679/2011, the curriculum changed to allow obtaining the master's degree, including CUs such as Innovation, Clinical management and supervision, the scientific dissertation or professional internship, with a final report or final project work. On the other hand, it seemed to be the first time that the historical perspective was valued, with the inclusion of the CU of Historical and epistemological evolution of nursing. This step is important because "knowledge of nursing history may also contribute to decision-making in health care and even improve nursing care . . ." (Vieira & Ferreira, 2008, p. 167).

The conceptualization of helping relationships in work settings with planning and adequacy of the psychosocial intervention was one of the aspects included in the curriculum approved by Ordinance no. 404/2007 of the School

of Health of Vale do Ave. This institution had already included CUs such as Psychosocial intervention models (included for the first time in a specialty curriculum) and Body mechanics. Later, in 2010, Notice no. 5398/2010 on the curriculum leading to a master's degree at CESPU added the CUs of Project Methodology I and II and internship options in RN Care of People with Burns, Rehabilitation Nursing Care of People with Cancer and at the End of Life, Rehabilitation Nursing Care of Children, and Internship in Rehabilitation Nursing Care in Sports. It was the first time that training areas with internships in Rehabilitation Nursing Care of People with Burns, the Child and the Person with Cancer and at the End of Life were included, which is in line with OE Regulation No. 125/2011 (p. 8658) where the specialist nurse in RN “cares for people with special needs, throughout the life cycle” and “identifies the needs for specialized rehabilitation nursing intervention among people of all ages.” The identification of requirements and conditions to produce scientific knowledge has also been addressed in several curricula, such as in the CU of Epistemology of RN, which is included in the curriculum of the São Francisco das Misericórdias School of Nursing approved by Ordinance No. 405/2007. In addition to the CU of Research and Epistemology in RN, it also includes the CU of Human Kinesiology in its curriculum, offering Clinical Experience in Intensive Care as an option for the first time. It is interesting to note that the specialist nurse in RN played an increasingly important role in intensive care, subsequently regulated by OE Regulation No. 743/2019.

Teaching the person and the caregiver is part of the competencies of the specialist nurse in RN. In Ordinance No. 784/2007, authorizing the postgraduate specialization degree in RN at the Portuguese Red Cross School of Health, it is interesting to note the inclusion of CUs with greater emphasis on health promotion and maintenance, such as Formative intervention process and Seminars such as Rehabilitation and citizenship, Research, and Continuous care.

Ordinance No. 100/2008 created the postgraduate specialization degree in RN at the Calouste Gulbenkian School of Nursing of the University of Minho and included CUs such as Rehabilitation nursing: Function and adaptation, Rehabilitation nursing in the community, Health, environment, and family, and Person with disability, which reflects an increased concern with the adaptation and reintegration of the person in the community.

“The introduction of information and communication technologies (ICTs) into health systems benefits citizens and service providers. The use of ICTs in the health field is crucial for promoting safer, more accessible, and efficient ways of using health care” (DGS, 2010, p. 3). Ordinance No. 325/2008 introduced them as a CU for the first time in the postgraduate specialization degree in RN at the Nursing School Dr. José Timóteo Montalvão. Other CUs were also included, such as Statistical epidemiology and Demography (emphasizing the previously mentioned socio-demographic changes), Hygiene, safety, and ergonomics, and Pedagogical practices.

Health law aims to promote and protect health, as well as

protect the health data of individuals and communities. For the first time in an RN curriculum, Ordinance no. 1380/2008 introduced the CU of Health Law in the postgraduate specialization degree in RN at the Portuguese Red Cross Health School of Oliveira de Azeméis. The health research methodology is essential for providing RN care with increased quality and safety, which has been a concern in all RN curricula, but particularly in the curriculum of the School of Health of the Polytechnic Institute of Bragança (Ordinance No. 1446/2008). In this curriculum, it is interesting to note the hours planned exclusively for research, with 135 hours for the CU of Research methodology and the CU of Applied research in RN, as well as 135 hours of seminars.

Later, Order no. 4786/2010 to obtain the master's degree in RN included CUs such as Research methods and techniques and Clinical training and supervision.

There is a set of instruments for assessing and quantifying RN care that support professional practice/decision-making. With the introduction of CUs such as RN instruments (I and II) in the curriculum of the postgraduate degree in RN through Ordinance no. 309/2009, the São João de Deus School of Nursing of the University of Évora was the first one to address this aspect more specifically. It is also interesting to note that other aspects were addressed for the first time in this curriculum, such as Health care policies and models and Psychosocial aspects of disability. Ordinance no. 1518/2004 approved the second curriculum of the postgraduate specialization degree in RN in Portugal at the Nursing School of Porto (Correia et al., 2021).

In addition to the initial major areas in the curriculum, other CUs were also included such as Epistemology of nursing, Bioethics and Biolaw, Evidence-based practice, Clinical supervision, Human kinesiology, as well as some optional CUs such as Child and adolescent health psychology, Physical activity and human development, Complementary therapies and rehabilitation, Gerontogeriatric rehabilitation, Sexuality education, Health education, Integrated continuous care, and Quality in health. In a first analysis, these changes in the syllabus and areas of coverage reflected the concern with active aging (focusing on physical activity and maintenance of quality of life), the promotion of individual autonomy and mobility, and the complementarity of new therapies. Order no. 19671/2009 of the School of Health of the Polytechnic Institute of Viseu changed the curriculum and, for the first time, included the CU of Advanced nursing and the CU of Health promotion. On the other hand, the optional CUs addressed aspects such as Ergonomics, Psychomotricity in older people, and Inclusion and citizenship of people with disabilities, and, for the first time, clinical internships in Gerontological rehabilitation and Palliative care.

The advances in scientific nursing knowledge have been evident. Strategies with their own theories have been increasingly used to support research, and the CU of Nursing theory was introduced for the first time at the Nursing School of Coimbra by Order no. 19907/2009, which also made it possible to obtain the master's degree in RN.

Order no. 12815/2010 changed the curriculum of the postgraduate degree in RN of the Nursing School of Lisbon with the introduction of the CUs of Nursing and health policies and Advanced nursing.

Quality care requires “. . . universal health coverage [which] means all people and communities can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective . . .” (Organização Mundial de Saúde, 2020 p. 8). In Portugal, the last postgraduate degree in RN was authorized at the Santa Maria College of Nursing (Ordinance No. 127/2016), including, for example, the CU of Quality in specialized nursing care.

The government is responsible for providing better and more adequate public health services. In recent decades, the Portuguese government has sought to provide quality care to the population. Since the end of the 20th century and the beginning of the 21st century, with the emergence of complex challenges in the treatment of conditions with long-term complications, there has been a substantial investment in the training of RNs to improve not only the technical resources available but also the scientific and theoretical foundations for this specialty.

All postgraduate RN curricula included aspects that allow RNs to make more informed, evidence-based decisions to respond more effectively to the population’s rehabilitation care needs. This aspect was reinforced in OE Regulation no. 125/2011 (p. 8658), stating that “the high level of knowledge and increased experience allow them to make decisions regarding health promotion, prevention of secondary complications, treatment, and rehabilitation, maximizing the individual’s potential”.

Due to the changes in demographic characteristics, the use of different health technologies, and the diversity of management methods in Portugal, the OE published standards for the calculation of safe nurse staffing, contributing to the strengthening of nursing care, as has long been recommended internationally (Regulamento n.º 743/2019 da Ordem dos Enfermeiros).

More recently, in 2021, the OE issued Notice no. 3915/2021, which establishes the “training program that integrates the study cycle of the master’s degree aimed at developing the specific competencies of the specialist nurse in RN” (Aviso n.º 3915/2021 da Ordem dos Enfermeiros, p. 222). It also mentions that

. . . the training pathway will consist of two parts: a theoretical training program with common areas of nursing, research, and ethics and deontology, to be developed in formal contexts or accredited by them, and a clinical pathway, with supervision and evaluation under the responsibility of the Ordem dos Enfermeiros. (Aviso n.º 3915/2021 of the Ordem dos Enfermeiros, p. 229)

## Conclusion

In Portugal, education/training in RN has evolved since 2006 under the influence of political and socio-demographic changes.

Due to the technological and scientific advances and the evolution of health systems, RN care has become more complex in terms of innovation and education/training, with strong investment in research, health promotion, support to informal caregivers, functional recovery, and end-of-life care.

There is also a trend towards home care and the participation of patients and families as care partners.

In this context, education/training in RN has been able to meet the health challenges within the legislative assumptions and the specific competencies of specialist nurses in RN.

Education/training in RN increasingly tends towards the excellence of care in promoting autonomy to achieve health gains in all clinical practice settings.

Future studies on this topic should include documents from the archives of several education institutions, namely the curricula, since the documental sources were retrieved from the Portuguese official journal, which may be a limitation of this study.

## Author contributions

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