

ECOHEALTH APPROACH IN PORTUGUESE NURSING EDUCATION: DOCUMENTARY ANALYSIS

ABORDAGEM DA ECOSSAÚDE NA EDUCAÇÃO EM ENFERMAGEM PORTUGUESA: ANÁLISE DOCUMENTAL

ENFOQUE DE LA ECOSALUD EN LA EDUCACIÓN EN ENFERMERÍA PORTUGUESA: ANÁLISIS DOCUMENTAL

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Objective: To identify content related to Ecohealth in the curricula of Nursing Undergraduate Programs taught in Portugal. **Method:** Descriptive documentary analysis with a qualitative approach. Data were collected from 19 online curriculums. **Results:** There is no reference to the concept of Ecohealth in the curriculums. Among the most frequently discussed principles is social and gender equity. There is little visibility in the curriculums with content related to the connection between health and the environment, sustainable development, and participation. This highlights the absence of an ecosocial approach in Nursing education that prepares future professionals for today's complex challenges, such as social justice and climate change. **Final considerations:** The need for a paradigm shift, particularly an ecocentric paradigm in Nursing education, was identified. Ecohealth can contribute to expanding the traditional view of teaching, investing in ecosocial education to transform the world.

Descriptors: Sustainable Development. Equity. Community Participation. Nursing Education. Social Determinants of Health.

Objetivo: identificar conteúdos relacionados com a Ecosaúde nos planos curriculares dos Cursos de Licenciatura em Enfermagem lecionados em Portugal. Método: análise documental, do tipo descritiva, com abordagem qualitativa. Dados recolhidos em 19 planos de estudos acessíveis online. Resultados: não existe referência nos planos de estudos ao conceito de Ecosaúde. De entre os princípios mais abordados surge o da equidade social e de género. Pouca visibilidade nos planos de estudos com conteúdos relacionados com a conexão entre saúde e ambiente, desenvolvimento sustentável e participação. Denota-se a ausência de abordagem ecossocial no ensino

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de Enfermagem que prepare os futuros profissionais para os desafios complexos atuais, como a justiça social e as alterações climáticas. Considerações finais: identificou-se a necessidade de mudança de paradigma, nomeadamente ecocêntrico na educação de Enfermagem, podendo a Ecossaúde contribuir para expandir a visão tradicional do ensino, investindo na educação eco-social para transformar o mundo.

Descritores: Desenvolvimento Sustentável. Equidade. Participação da Comunidade. Educação em Enfermagem. Determinantes Sociais da Saúde.

Objetivo: Identificar contenidos relacionados con la Ecosalud en los planes de estudio de los programas de grado de Enfermería impartidos en Portugal. Método: Análisis documental descriptivo con enfoque cualitativo. Se recopilaron datos de 19 planes de estudio en línea. Resultados: No se hace referencia al concepto de Ecosalud en los planes de estudio. Entre los principios más abordados se encuentra la equidad social y de género. Existe poca visibilidad en los planes de estudio con contenidos relacionados con la conexión entre la salud y el medio ambiente, el desarrollo sostenible y la participación. Esto pone de manifiesto la ausencia de un enfoque ecosocial en la formación en Enfermería que prepare a los futuros profesionales para los complejos desafíos actuales, como la justicia social y el cambio climático. Consideraciones finales: Se identificó la necesidad de un cambio de paradigma, en particular un paradigma ecocéntrico en la formación en Enfermería. La Ecosalud puede contribuir a ampliar la visión tradicional de la enseñanza, invirtiendo en educación ecosocial para transformar el mundo.

Descriptorios: Desarrollo Sostenible. Equidad. Participación Comunitaria. Formación en Enfermería. Determinantes Sociales de la Salud.

Introduction

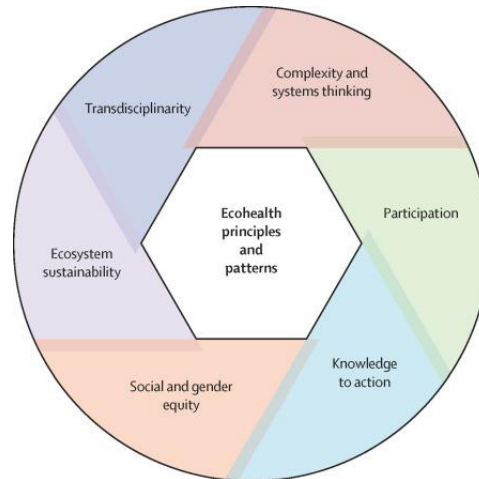
Faced with the rapid global ecological changes that threaten human well-being and social stability, it is essential to value the reciprocity between the ecological and the social as fundamental aspects of a proactive approach to future health and collective well-being⁽¹⁻²⁾. The importance of ecosystem conservation and restoration for human life and health is highlighted in the 2030 Agenda for Sustainable Development⁽³⁾, representing an opportunity for the field of Ecohealth, which views sustainability as an essential element for the development of theory and practice⁽⁴⁾. The concept of sustainability encompasses three interrelated dimensions: social, ecological, and economic⁽⁵⁾.

Nursing education can play both a direct and indirect role by encouraging students to become agents of change in building healthier societies⁽⁶⁾. It is crucial to emphasize the essential role of nurses in achieving the Sustainable Development Goals (SDGs), as this role may be unknown to many⁽⁷⁾, thus requiring significant investment in both undergraduate and postgraduate training⁽⁸⁾.

The Ecohealth connects population or community health and well-being with the environment and sustainable development. It is based on the idea that health outcomes are a result of interactions between ecological and socioeconomic dimensions, as well as how people use or impact ecosystems. These interactions affect ecosystem quality, the provision of ecosystem services, and sustainability, making it important to contribute to improving both ecosystem and human health⁽⁹⁾.

This approach recognizes the value of all forms of life and argues that health and well-being are incompatible with a resource-depleted, polluted, and socially unstable planet⁽¹⁰⁾. It is grounded in the principles presented by Charron⁽⁹⁾, namely: systems thinking, transdisciplinary research, participation, gender, social equity, knowledge for action, and sustainability (Figure 1), building upon the pillars proposed by other authors⁽¹¹⁾.

It constitutes a broad international field of research, education, and practice that encompasses different schools of thought⁽⁹⁾.

Figure 1 – Ecohealth Principles and Standards

Source: Webb et al.^(12,88)

In the logic of systems thinking, the parts of a system (humans, animals, and the environment) require a global understanding, taking into account the context of interactions and connections between them, mutually affecting each other. Transdisciplinary research presupposes an inclusive logic of ecosystem-related health issues, with a common framework of concepts and theories combined with the involvement of various disciplines and stakeholders, such as researchers, community representatives, and decision-makers. Participation refers to the goal of cooperation and collaboration. Social and gender equity seek to analyze unequal and unjust conditions that affect the health and well-being of disadvantaged groups in society. Knowledge for action is used to improve the environment, health, and human well-being. Regarding sustainability, it affirms the protection of ecosystems and the improvement of degraded environments to maintain the health and well-being of people, as well as future generations. In this sense, Ecohealth analyzes the disparities in quality, vulnerability, and resilience of ecosystem connections between the poor and the rich people⁽⁹⁾.

The literature⁽¹²⁾ suggests a paradigm shift that systematically combines environmental sustainability, transdisciplinarity, social justice, and gender equity, as well as participation, providing a pathway that fosters understanding

of complex public health problems and allows for the application of the knowledge generated in effective policies and actions at multiple local, national, and global levels⁽¹²⁾.

A study⁽²⁾ highlights the role of education in understanding ecological determinants of health, in addition to social determinants of health, within the integrative vision of an ecossocial approach to public health, arguing for the need for profound educational reform that responds to (in)equities and sustainability challenges.

They identify some topics to be addressed, such as change-oriented practices in complexity science; community organizing; social practice theory; interdisciplinary work in the governance of social transitions; transformative learning; Theory U; generative dialogue; ecologies and ecosystems as essential for human health, highlighting the complex and interactive impacts of climate change, biodiversity loss, pollution, ocean acidification and depletion, land and water degradation, and food security⁽²⁾.

They differentiate ecological determinants from the field of environmental health, highlighting the importance of both, within a framework of complementarity, where environmental public health focuses on the built environment, food handling, water safety, waste, workplace health and safety, communicable disease control, and, more broadly, the identification and management of known risks and exposures⁽²⁾. Furthermore,

they argue that these components of health learning cannot be optional, but rather structural. However, they believe that educational reform alone is insufficient for the urgently needed transformation, as it will require the involvement of society as a whole and the power structures that promote ecological and social degradation.

Another study⁽¹²⁾ shares this idea, calling for the urgent need for transformative educational models in various areas, disciplines, and domains to address socioecological challenges, particularly ecological, social, and health crises (climate change, social justice, systemic racism, dependence on fossil fuels, among others). They advocate the importance of valuing broader intellectual perspectives (such as Ecohealth), and transformative learning through an environment that encourages dialogue, action, and reflection, fostering collaborative learning between teachers and students⁽¹²⁾.

The premise of caring for the planet, emphasizing the importance of the ecocentric paradigm for the discipline and profession of nursing, is present in the concepts of several authors. It is therefore imperative to mobilize nursing education to promote interconnectedness with the planet, emphasizing the links between social and gender equity, ecosystem sustainability, health, and well-being, and giving visibility to these issues in study plans⁽¹³⁾.

This study aimed to identify content related to Ecohealth in the curricula of undergraduate nursing programs taught in Portugal.

Method

This descriptive documentary research used a qualitative approach to analyze data from study plans made available online, following the Standards for Reporting Qualitative Research (SRQE) recommendations⁽¹⁴⁾. The following guiding question was defined: Are there study plans related to Ecohealth in the study plans of Undergraduate Nursing programs taught in Portugal?

Thirty-six documents were found, and 19 were selected for analysis, meeting the defined inclusion criteria: making the study plans of the Undergraduate Nursing program available online, along with the respective study plans covered in the curricular units. The exclusion criteria were: study plans for programs other than the Undergraduate Nursing program; from academic years prior to 2023-2024; and unofficial documents or information.

The documentary analysis was conducted in six stages⁽¹⁵⁾: determining the objective; identifying the source; locating the source and obtaining the material; processing the data; preparing the files; logically constructing and writing the paper.

Data collection took place in August 2024. All higher education institutions offering the Bachelor's Degree in Nursing in Portugal were identified, totaling 36 institutions⁽¹⁶⁾, of which 20 (55.6%) are public institutions and 16 (44.4%) are private institutions.

The information available online, freely accessible, on the institutional websites of the Schools of Nursing/Schools of Health was researched and analyzed to identify the content on Ecohealth presented in the curriculum of the Bachelor's Degree in Nursing programs for the 2023-2024 academic year.

In this study, no personal data were collected; only publicly available information on institutional websites was analyzed, in compliance with qualitative research guidelines. Therefore, submission to an ethics committee was not considered necessary. Each higher education institution was coded with a letter from A to T, ensuring confidentiality in the presentation of results.

For data analysis, content, categorical, and semantic analysis were performed in three stages: pre-analysis, material exploration, and processing of results, inference, and interpretation. An exploratory and selective analysis of the documents was conducted, grouping the information according to categorization, taking

into account the principles of Ecohealth, namely gender and social equity, ecosystem sustainability and participation^(9,11).

In the analysis framework developed for data extraction, information was collected on: Institutions (letter assigned), Curricular Units (designation assigned by the Institution), and Content (content included in the curricular unit file relevant to the analysis).

Results

Of the 19 curriculums analyzed, 15 (78.9%) are from public polytechnic higher education institutions (from A to P) and 4 (21.1%) are from private polytechnic higher education institutions (from Q to T).

Curriculums for Undergraduate Nursing Programs: Overview

It was found that none of the curriculums explicitly refer to Ecohealth, presenting some content related to the connection between health and the environment, sustainable development goals, participation, social and gender equity, and ecosystem sustainability.

Connection between Health and Ecosystems

From the analysis of the curriculum contents of the curricular units, only 3 (15.6%) curriculums reflect the connection between health and the environment (public institutions, and private institutions), as shown in Box 1.

Box 1 – Content related to the connection between health and the environment. 2024

Category	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S	T	
Vision of the connection between health and environment							x				x									x
One Health							x													
Ecology and health											x									x

Source: own elaboration.

Two content areas mentioned the concepts of Ecology and Health (L and T), and only one

referenced the concept of One Health (G), taught in an optional course unit, as specified in Box 2.

Box 2 – Distribution of content related to the connection between health and the environment by course unit, year, and educational institution. 2024

Concept	Designation of Curricular Units	Year	Educational Institution
Ecology and Health	Nursing Fundamentals I	1 st	L
	Health Anthropology	1 st	T
One Health	Optional I – Nursing Care for Migrant Populations, Refugees, and Ethnic Minorities	4 th	G

Source: own elaboration.

Sustainable Development Goals

Only 6 (31.6%) curriculum plans (A, F, G, H, P, and R) explicitly reference the SDGs (31.6%), across 11 curricular units. The institution with

the most curricular units addressing the SDGs is

School A, with 4 curricular units addressing the topic, as shown in Box 3.

Box 3 – Distribution of content related to the Sustainable Development Goals by curricular unit, year, and educational institution. 2024

Concept	Designation of Curricular Units	Year	Educational Institution
Sustainable Development Goals	Nursing I – History and Fundamentals	1 st	A
	Nursing II – Health, Family, and Community	1 st	A
	Nursing VI – Sexual and Reproductive Health	3 rd	A
	Nursing VI – Children and Youth	3 rd	A
	Health and Health Promotion	1 st	E
	Public Health Nursing and Epidemiology	1 st	G
	Option I – Nursing Care for Migrant Populations, Refugees, and Ethnic Minorities	4 th	G
	Community Service Option	2 nd	H
	Community Health Nursing	3 rd	P
	Bioethics and Ethics in Nursing	1 st	R
Nursing – Mental Health	3 rd	R	

Source: own elaboration.

Social and Gender Equity

Regarding Social and Gender Equity, not all study plans cover topics in this area (C, F and I, public institutions), with 16 (84.2%) including these contents.

Among the topics covered, the following stand out: Gender and Health [9], Cultural Diversity and Multiculturalism [11], Power and Relationships [9], with an emphasis on issues of violence and abuse; Health Inequalities [5], Migration [4], Poverty [3], Stereotypes, Prejudice, and Stigma [3], Human Rights [3], Increased Vulnerability/Vulnerable Groups [2], and Social Justice [1]. There is no reference to concepts such as intersectionality and empowerment. Three institutions (G, P, and

S) refer to social determinants and four to health determinants (A, N, R, and S), without specifying the content covered. The institution that presents the most content related to Equity and Health in its curriculum is G [9], followed by R [8] and D [6], as specified in Box 4.

Environmental Sustainability of Ecosystems

Regarding the issue of ecosystem sustainability, 9 (47.4%) curriculums (A, C, F, O, P, Q, R, S, and T) address topics focused primarily on environmental health [7], 5 on crisis and catastrophe, and only 2 on climate change. One curriculum addresses the issue of integrated

development within the Entrepreneurship Curricular Unit, as detailed in Box 5.

Box 5 – Distribution of content related to ecosystem environmental sustainability. 2024

Category	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S	T
Ecosystem Environmental Sustainability	x		x			x								x	x	x	x	x	x
Environmental Health			x			x								x	x		x	x	x
Crisis and Catastrophe	x		x	x											x	x			
Water, Waste, Soil, and Air			x																
Climate Change							x								x				
Food Security			x																
Communicable Diseases			x																
Development				x															

Source: own elaboration.

Regarding participation, it is only included in the Curriculum Plans of 5 (26.3%) Higher Education Institutions (D, G, H, P, and R). They

address issues related to citizenship, partnerships, social responsibility, volunteering, and network intervention, as detailed in Box 6.

Box 6 – Distribution of content related to participation. 2024

Category	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S	T
Participation				x			x	x							X		x		
Citizenship								x											
Partnerships							x												
Social Responsibility								x											
Volunteering								x									x		
Community Involvement															X				
Network Intervention																	x		

Source: own elaboration.

Discussion

Of the three most influential holistic and integrative concepts in the field of human, animal, and ecosystem health—Planetary Health, One Health, and Ecohealth⁽¹⁰⁾, only One Health is present. These concepts are sometimes treated as synonyms, but they differ in their scientific contribution, primary focus, and values. Planetary Health focuses on global health threats,

with a primary focus on human health, from an anthropocentric perspective. One Health is considered an approach that has its origins in public health and veterinary medicine, with an interdisciplinary approach, highlighting disease transmission between humans and animals. More recently, it has sought to include aspects such as food security, adaptation to climate change, and biodiversity, but does not address social and gender equity⁽¹⁷⁾. The EcoHealth

approach focuses on biodiversity, on all living creatures, recognizing that parasites, single-celled organisms, and possibly also viruses are of interest and should be protected, in an ecocentric perspective that focuses primarily on the connection between health and ecosystems⁽¹⁰⁾.

Few institutions include the SDGs in their curricula (31.6%), which is in line with the findings of authors⁽¹⁸⁾, who state that, at major Canadian universities, the SDGs and associated targets were not clearly defined in the curricula and in most nursing-specific strategic plans. Therefore, promoting greater nurse engagement with the SDGs, in order to enhance the profession's contributions, requires significant investment in nursing education, both at the undergraduate and graduate levels⁽⁸⁾.

Some studies advocate revising nursing curricula to incorporate the content^(10,18), allowing undergraduate programs to initially explore them⁽¹⁹⁾. In this sense, including the SDGs in nursing curricula is an ethical demand, within the context of global citizenship, contributing to a better and healthier world⁽⁶⁾. The SDGs provide nursing educators worldwide with a reference point within the framework of global nursing, promoting equality in health⁽²⁰⁾. Teaching the SDGs advocates a paradigm shift in higher education, with active student participation, promoting a culture of personal and professional sustainability⁽²¹⁾.

Regarding social and gender equity, 84.2% of educational institutions integrate content on these topics. It is important to incorporate this content into all curriculums. According to the International Council of Nurses (ICN)^(22:16), "Social inequalities exist across multiple domains, such as age, sex, race, ethnicity, religion, language, and physical and mental health. Furthermore, some groups in society are particularly disadvantaged, including the homeless, migrants, refugees, and asylum seekers". Therefore, the concepts of social justice and equity are considered central to the nursing profession⁽²²⁾. Furthermore, achieving gender equality is one of the SDGs.

Within the scope of ecosystem sustainability, the content reveals a lack of approaches to

aspects related to several areas, namely a holistic view of the three pillars of sustainability (social, ecological, and economic)⁽⁵⁾ and the ecological determinants of health⁽²⁾. Authors⁽⁶⁾ point to emergency care as topics to be integrated into curricula, including the ability to respond to climate change and emerging outbreaks and climate-related diseases; food safety, breastfeeding promotion, and organic food production; skills related to waste management; sustainable purchasing; aspects related to energy use and the development of renewable energy to support green hospitals; and knowledge of environmentally safe technologies and products.

Knowledge about sustainability principles and climate change is scarce in nursing curricula, making its introduction essential given the challenges faced⁽¹³⁾.

Despite the high value placed on SDG 3 (Quality Health) by nurses, it can only be achieved through the complementarity of other SDGs. It is essential to expand nurses' intervention to include broader environmental, economic, or social aspects, such as education or economic stability⁽¹⁹⁾. There are different modes of participation with the power issues present, from Sherry Arnstein's participation ladder, the most used, to the encouragement of participation evident in the 2030 Agenda, as commitments to transform the world⁽²³⁾.

There is little investment in study plans aimed at educating for participation, whether at the individual, community, or research level, despite its importance, as established in various health promotion charters, and its intrinsic relationship with the development of society, which is essential for sustainable development⁽²³⁾.

Participation is a demand for empowerment, and when promoted correctly, it is positive for increasing people's engagement, social inclusion, a sense of belonging to a community, and social emancipation, aiming for the common good⁽²⁴⁾. Strengthening participation is an important strategy for enhancing democracy in health systems, which is still lacking⁽²⁵⁾.

Participatory strategies, when based on interdependence, contribute to problem-solving,

as they “[...] improve the quality of decisions, enabling them to be based on the voice, experience, and forms of knowledge of new actors who can now influence public decisions”^(25:2). Some studies recommend formally integrating citizen science into school curricula, for example, with a view to citizen participation, training, and empowerment, while also highlighting some unequal participatory approaches⁽²³⁾.

Thus, the limited visibility of topics such as sustainability and participation points to the possible influence of the traditional curriculum, which focuses primarily on individual care as a response to health-disease processes, with little emphasis on systemic and ecological issues. It is considered important reconceptualizing the connection between human and environmental health, shifting the view of human superiority, valuing all forms of life, and abandoning paternalistic models without established power distribution, which supports the need for educational reform.

The results of this study allow us to conclude that there is a lack of content related to the connection between health and the environment, sustainable development goals, ecosystem sustainability, and participation, reflected in the study plans of Nursing Undergraduate Programs in Portugal.

One limitation of this study is the impossibility of accurately analyzing the content covered or the workload allocated to each course, given that the information is not available online.

This study contributes to fostering reflection on undergraduate nursing education in Portugal, taking into account the principles of Ecohealth to illustrate the national landscape.

Final considerations

Among the most frequently covered topics in curriculums, those related to social and gender equity stand out, although some study plans do not formally address these topics. Less frequently covered topics relate to the connection between health and the environment and the SDGs. The need for greater engagement with the SDGs is

highlighted, within a comprehensive framework that expands nursing beyond its traditional scope, toward a comprehensive understanding of complex public health problems. Education is a powerful tool for transforming the world and expanding the contexts of nurses’ professional practice, contributing to a paradigm shift in public health, with an emphasis on eco-social aspects.

To support nursing education, an Ecohealth approach is proposed, based on its principles, in transformative learning, grounded in an ecocentric paradigm, emphasizing its contributions to sustainable development and to transforming the world.

The absence of these contents in study plans presents a potential barrier to the development of nursing practices in professional settings. Future research is suggested to understand student and educator perceptions of Ecohealth, develop innovative pedagogical methodologies in this area, and assess the explicit inclusion of this topic in study plans and its impact on the acquisition of interdisciplinary skills.

Collaborations:

1 – Project design and planning: Vanessa Monteiro and Pedro Melo;

2 – Data analysis and interpretation: Vanessa Monteiro, Jóni Madureira, and Pedro Melo;

3 – Writing and/or critical review: Vanessa Monteiro, Jóni Madureira, Inês Fonseca, and Pedro Melo;

4 – Final version approval: Vanessa Monteiro, Jóni Madureira, Inês Fonseca, and Pedro Melo.

Conflicts of interest

There are no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available in the article itself.

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