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CLINICAL RESEARCH AS A CURRICULAR UNIT IN PORTUGUESE NURSING HIGHER EDUCATION INSTITUTIONS: CURRENT SITUATION AND CHALLENGES

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Abstract: Clinical research is fundamental to the development of science. The aim of the research carried out was to analyze the study plans of Portuguese higher education institutions of Nursing Degree courses regarding the presence of mandatory and/or optional theoretical curricular units on clinical research, using the General Directorate of Higher Education as the primary source for data collection. The data was collected between December 1 and 20, 2024, from 39 identified institutions, and a detailed analysis of each syllabus was carried out. The study was of a descriptive observational documentary nature, with no direct manipulation of variables. The data was collected in an Excel database and treated statistically in a descriptive manner. The results point to a need to revise the curriculum of study plans with regard to clinical research, in order to ensure that future nurses are trained in this area right from their basic training. This improvement in curricular aspects could contribute not only to improving the academic training of students, but also to improving the provision of nursing care to patients and, consequently, to enriching the health system as a whole.

Keywords: Nursing; Clinical Nursing Research; Nursing Research; Educational Institutions; Professional Competence

INTRODUCTION

Clinical research (CR) in Portugal has grown exponentially, with an increase in the number of clinical research centers and diversification in the areas of research, especially in the area of clinical trials.

However, there are still asymmetries in the national context: in the number of users followed, in the national distribution of research centers, in the number of professionals involved, in the tasks of each member, in the understanding and adherence to a CR by users and professionals, among others, making this process heterogeneous in terms of its analysis, according to Apifarma (2024).

CR in Portugal is regulated by Law no. 21/2014, of April 16 (2014), and is considered to be all of the following

“the systematic study aimed at discovering or verifying the distribution or effect of health factors, health states or outcomes, health or disease processes, the performance and safety of interventions or the provision of health care, covering in particular: a) The system for conducting clinical trials on medicinal products for human use, resulting from the transposition of Directive no. 2001/20/EC, of the European Parliament and of the Council of 4 April 2001 on the approximation of the laws, regulations and administrative provisions of the Member States relating to the implementation of good clinical practice in the conduct of clinical trials on medicinal products for human use”. 2001/20/EC of the European Parliament and of the Council of April 4 on the approximation of the laws, regulations and administrative provisions of the Member States relating to the implementation of good clinical practice in the conduct of clinical trials on medicinal products for human use; b) The regime for the clinical investigation of medical devices resulting from the partial transposition of Directive 2007/47/EC of the European Parliament and of the Council of September 5”.

Order No. 1739/2024, from the Ministry of Health (2024), establishes measures to strengthen Clinical Research and Biomedical Innovation (CR & BI) in the National Health Service, giving greater autonomy and management capacity to Clinical Research Sites, namely for their contribution to the country's development, job creation and attracting investment, stimulating the retention of scientific and medical talent and increasing scientific knowledge, in order to make the research ecosystem more competitive, involving partners and empowering .

The training of professionals in the area of CR is essential in this process, particularly at the basic training level, and it is important to analyze the study plans (SP) of the Portuguese Higher Education Institutions (PHEIs) that teach Nursing courses, seeking to understand

whether or not nurses are prepared for CR & BI in their training.

RESEARCH QUESTION

Do Portuguese Higher Education Institutions (PHEIs) of Nursing Degree courses include Clinical Research curricular units (CRCU) in their study plans?

OBJECTIVE

To analyze the PHEIs study plans in terms of the presence of compulsory and/or optional theoretical curricular units on clinical research.

METHODOLOGY

Data was collected between December 1 and 20, 2024, using the Directorate General of Higher Education (DGES) as the primary source, identifying the PHEIs with public and private nursing courses

Once the institutions had been identified, the current SPs were consulted by searching the Diário da República Online and the institutions' websites. This was followed by a detailed analysis of each SP, collecting data that would not only answer the research question, but also contribute to enriching the research. The study carried out is of a descriptive observational documentary nature, seeking to describe the CRCU panorama in the PHEIs, without directly manipulating variables. The data was collected in an Excel database and treated statistically in a descriptive manner.

RESULTS

Although it is essential to adopt an individualized approach to the analysis of each SP in order to answer the research question, the data analysis showed that it would make sense to obtain a global perspective of the Nursing SP in various parameters, allowing for a more comprehensive characterization of Nursing education and a deeper understanding of its genesis

Thus, all of the courses analyzed correspond to a Nursing degree, with a duration of 8 semesters, and have SPs that make up 240 ECTS. 39 nursing schools registered with the DGES were analyzed, which totals the institutions teaching the Nursing degree in Portugal. For only one of the institutions was access to the SP via the Diário da República unavailable, so the consultation was carried out on the institution's website.

An analysis of the data obtained shows that the total number of slots available for the 2024-2025 academic year is 2979, with the type of education divided into types of institution: 20 institutions classified as Public Polytechnic Higher Education (1970 slots), 17 institutions classified as Private Polytechnic Higher Education (869 slots) and two institutions classified as Polytechnic Higher Education (140 places), which slots the classification not being explicit, are two private institutions. In terms of location, the north of Portugal has the highest number of educational institutions (35.9%), followed by the south (30.8%), the center (23.1%) and the islands (10.3%).

The total number of curricular units (CU) available per SP, including electives and internships varies from 29 CU to 65 CU.

In a general analysis of the SPs and with regard to the existence or not of optional CU, 59% of the institutions have theoretical optional CU and 41% do not have theoretical optional CU.

Regarding the number of optional theoretical courses per PE, 54.5% have one optional course, 27.3% have two optional courses, 9.1% have 3 optional courses, 4.5% have 4 optional courses and 4.5% have 5 optional courses.

Within each optional course and in view of the diversified offer, of the 22 institutions that present theoretical CU in their curricula, three do not define the subjects (indication "To be defined annually by the competent

body”). In the analysis of the 19 institutions that present optional CU, the number of subject options presented is quite diverse, with a minimum of 2 and a maximum of 24.

Most of the SP were revised by the PHEIs in 2019 (16), 2023 (8) and 2024 (6). 1 SP has no information about the revision.

With regard to the number of CUs (of the 39 public and private PHEIs), only 30 have the word “Research”, of which 41% have two CUs, 38.5% have 1 CU, 15.4% have 3 CUs and 10.3% have 4 CUs.

Table 1 shows the distribution of the 30 CUs that include the word “Research”.

CU	n
Nursing Research	7
Nursing Research I and Nursing Research 1	8
Nursing Research II and Nursing Research 2	8
Research I/ Research 1	7
Research II/ Research 2	7
Research	3
Research IV - Project	2
Health Research I	2
Health Research II	2
Nursing Research Project	2
Nursing Research III	2
Research Methods	2
Introduction to Health Research	2
Research Methodologies	1
Introduction to Research	1
Research III	1
Nursing Research Methods and Techniques	1
Research Project	1
Research I - Nursing Epistemology	1
Research II - Research Process	1
Research III - Evidence-Based Nursing	1
Research Practice	1
Fundamentals of Nursing Research	1
Initiation to Nursing Research	1
Nursing Research Methodologies	1
Research Methods and Epidemiology	1
Quantitative and Qualitative Research Methods in Nursing	1
Applied Research	1
Research methodologies	1
Health Research	1

Table 1. CUs with the word Investigation

None of the educational institutions include CUs related to clinical research in their SP.

DISCUSSION

Analysis of the results shows variations in the number of courses between SPs from different institutions, in the total number of CU and in the number of optional CU. This situation reflects the lack of uniformity in the curricular structure of the courses and, consequently, very different training paths.

It can be seen that 41% of the SPs do not offer any theoretical optional CU. This situation limits the ability to deepen specific knowledge in areas of preference and emerging or specialized topics, and these optional CU could contribute to personalizing training and consequently differentiating entry into the job market. However, among the SPs that offer optional CU (59%), the variation between an offer of 2 CU and 24 CU is also very different.

It can be seen that the research CUs are geared towards the methodological foundations of research and the preparation of end-of-course projects. There is no Clinical Research CU in Nursing SPs, which is the central issue of this research, and this is a very important and relevant piece of data to analyze.

As CR is a growing area not only in Portugal, but throughout the world, this absence will be a gap in students’ training, and it is important to provide the SPs with CUs in this area, allowing them to increase the specific training and competence of students in research, in order to improve the quality of research in clinical contexts, and consequently improve nursing care, for the good of patients.

To sum up, the results point to a need to revise the curricula of the SPs with regard to clinical research, in order to ensure that future nurses are trained in this area right from their basic training. The standardization of the SPs also seems relevant, as well as the massification of the offer of optional courses in an ade-

quate and consensual number. Improving these curricular aspects could contribute not only to improving students' academic training, but also to enriching the health system as a whole.

CONCLUSION

Clinical Research is fundamental to the development of science.

Although ideally Clinical Research should be a compulsory CU in a Nursing course, the existence of optional CUs could initially boost the creation of Clinical Research CU, in addition to the fact that many institutions do not include optional CUs in their SP, which is an area that the next updates of the SP could target.

REFERENCES

APIFARMA. **Atlas dos ensaios clínicos ativos em Portugal: Dados globais 1ºS 2024**. Associação Portuguesa da Indústria Farmacêutica, 2024. Disponível em <https://apifarma.pt/wp-content/uploads/2024/09/Atlas-dos-ensaios-clinicos-em-Portugal-1oS-2024.pdf>. Acesso em: 3 dez. 2024.

Lei n.º 21/2014, de 16 de abril - Regime jurídico da investigação clínica. Diário da República, 1.ª série, n.º 75. Disponível em <https://dre.pt/home/-/dre/66184073>. Acesso em: 3 dez. 2024.

MINISTÉRIO DA SAÚDE. **Despacho n.º 1739/2024**. Diário da República, 2.ª série, 2024. <https://diariodarepublica.pt/dr/detalhe/despacho/1739-2024-848804841>. Acesso em: 3 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 236/2020 (n.º 238)**. Diário da República, 2.ª série, 2020. Disponível em <https://files.diariodarepublica.pt/2s/2020/02/042000000/0023600238.pdf>. Acesso em: 3 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 142/2019 (n.º 144)**. Diário da República, 2.ª série, 2019. Disponível em <https://files.diariodarepublica.pt/2s/2019/07/138000000/0014200144.pdf>. Acesso em: 3 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 174/2022 (n.º 176)**. Diário da República, 2.ª série, 2022. Disponível em <https://files.dre.pt/2s/2022/05/092000000/0017400176.pdf>. Acesso em: 6 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 313/2024 (n.º 317)**. Diário da República, 2.ª série, 2024. Disponível em <https://files.diariodarepublica.pt/2s/2024/04/064000000/0031300317.pdf>. Acesso em: 6 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 477/2024 (n.º 480)**. Diário da República, 2.ª série, 2024. Disponível em <https://files.diariodarepublica.pt/2s/2024/08/168000000/0047700480.pdf>. Acesso em: 6 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 199/2024 (n.º 203)**. Diário da República, 2.ª série, 2024. Disponível em <https://files.diariodarepublica.pt/2s/2024/09/169000000/0019900203.pdf>. Acesso em: 6 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 642/2017 (n.º 266)**. Diário da República, 2.ª série, 2017. Disponível em <https://files.diariodarepublica.pt/2s/2017/09/185000000/2126421266.pdf>. Acesso em: 7 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 170/2019 (n.º 172)**. Diário da República, 2.ª série, 2019. Disponível em <https://files.diariodarepublica.pt/2s/2019/08/159000000/0017000172.pdf>. Acesso em: 7 dez. 2024.

Although there has been some investment in recent years in CR training, there is an urgent need to implement and develop this very important area in the development of nursing education, in order to improve patient care.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

AUTHORIZATIONS/ RECOGNITION

By submitting the work, the authors assume responsibility for the entire content of the work.

REPÚBLICA PORTUGUESA. **Despacho n.º 170/2019 (n.º 172)**. Diário da República, 2.ª série, 2019. Disponível em <https://files.diariodarepublica.pt/2s/2019/08/159000000/0017000172.pdf>. Acesso em: 7 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 267/2023 (n.º 269)**. Diário da República, 2.ª série, 2023. Disponível em <https://files.diariodarepublica.pt/2s/2023/04/077000000/0026700269.pdf>. Acesso em: 7 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 8457/2023**. Diário da República, 2.ª série, 2023. <https://diariodarepublica.pt/dr/detalhe/despacho/8457-2023-220113477>. Acesso em: 7 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 218/2019 (n.º 221)**. Diário da República, 2.ª série, 2019. Disponível em <https://files.diariodarepublica.pt/2s/2019/10/210000000/0021800221.pdf>. Acesso em: 7 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 196/2023 (n.º 198)**. Diário da República, 2.ª série, 2023. Disponível em <https://files.diariodarepublica.pt/2s/2023/10/198000000/0019600198.pdf>. Acesso em: 7 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 160/2019 (n.º 163)**. Diário da República, 2.ª série, , 2019. Disponível em <https://files.diariodarepublica.pt/2s/2019/09/184000000/0016000163.pdf>. Acesso em: 7 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 156/2019 (n.º 159)**. Diário da República, 2.ª série, 2019. Disponível em. <https://files.diariodarepublica.pt/2s/2019/09/184000000/0015600159.pdf>. Acesso em: 7 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 1600/2023 (n.º 162)**. Diário da República, 2.ª série, 2023. Disponível em. <https://files.diariodarepublica.pt/2s/2023/11/221000000/0016000162.pdf>. Acesso em: 7 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 337/2024 (n.º 340)**. Diário da República, 2.ª série, 2024. Disponível em <https://files.diariodarepublica.pt/2s/2024/05/094000000/0033700340.pdf>. Acesso em: 8 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 281/2017 (n.º 9930)**. Diário da República, 2.ª série, 2017. Disponível em. <https://files.diariodarepublica.pt/2s/2017/09/175000000/1992819930.pdf>. Acesso em: 8 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 190/2019 (n.º 121)**. Diário da República, 2.ª série, 2019. Disponível em. <https://files.dre.pt/2s/2019/08/161000000/0011900121.pdf>. Acesso em: 8 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 140/2020 (n.º 120)**. Diário da República, 2.ª série, 2020. Disponível em <https://files.diariodarepublica.pt/2s/2020/11/213000000/0011400120.pdf>. Acesso em: 8 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 110/2019 (n.º 117)**. Diário da República, 2.ª série, 2019. Disponível em <https://files.diariodarepublica.pt/2s/2019/09/169000000/0011100117.pdf>. Acesso em: 8 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 473/2019 (n.º 476)**. Diário da República, 2.ª série, 2019. Disponível em <https://files.diariodarepublica.pt/2s/2019/08/151000000/0047300476.pdf>. Acesso em: 8 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 12356/2023**. Diário da República, 2.ª série, 2020. Disponível em <https://diariodarepublica.pt/dr/detalhe/despacho/12356-2023-225124727>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 807/2024 (n.º 811)**. Diário da República, 2.ª série, 2024. Disponível em <https://files.diariodarepublica.pt/2s/2024/05/094000000/0080700811.pdf>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 9954/2023**. Diário da República, 2.ª série, 2023. Disponível em <https://diariodarepublica.pt/dr/detalhe/despacho/9954-2023-222069226>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 271/2019 (n.º 275)**. Diário da República, 2.ª série, 2019, Disponível em <https://files.diariodarepublica.pt/2s/2019/11/221000000/0027100275.pdf>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 470/2019 (n.º 472)**. Diário da República, 2.ª série, 2019. Disponível em <https://files.diariodarepublica.pt/2s/2019/08/151000000/0047000472.pdf>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 184/2019 (n.º 187)**. Diário da República, 2.ª série, 2019. Disponível em <https://files.diariodarepublica.pt/2s/2019/08/151000000/0018400187.pdf>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Aviso n.º 14801/2019**. Diário da República, 2.ª série, 2019. Disponível em <https://diariodarepublica.pt/dr/detalhe/aviso/14801-2019-124917006>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 1320/2023 (n.º 134)**. Diário da República, 2.ª série, 2023. Disponível em <https://files.diariodarepublica.pt/2s/2023/09/180000000/0013200134.pdf>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 3490/2024**. Diário da República, 2.ª série, 2024. Disponível em <https://diariodarepublica.pt/dr/detalhe/despacho/3490-2024-857832590>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 284/2019 (n.º 286)**. Diário da República, 2.ª série, 2023. Disponível em <https://files.diariodarepublica.pt/2s/2019/09/181000000/0028400286.pdf>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Aviso n.º 14445/2019**. Diário da República, 2.ª série, 2019. Disponível em <https://diariodarepublica.pt/dr/detalhe/aviso/14445-2019-124750715>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 2340/2012**. Diário da República, 2.ª série, 2012. Disponível em <https://diariodarepublica.pt/dr/detalhe/despacho/2340-2012-1702435>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 514/2023 (n.º 516)**. Diário da República, 2.ª série, 2023. Disponível em <https://files.diariodarepublica.pt/2s/2023/07/145000000/0051400516.pdf>. Acesso em: 11 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 324/2019 (n.º 326)**. Diário da República, 2.ª série, 2019. Disponível em <https://files.diariodarepublica.pt/2s/2019/08/154000000/0032400326.pdf>. Acesso em: 12 dez. 2024.

REPÚBLICA PORTUGUESA. **Despacho n.º 9533/2012**. Diário da República, 2.ª série, 2012. Disponível em <https://files.dre.pt/2s/2012/10/192000000/3339533397.pdf>. Acesso em: 12 dez. 2024.

REPÚBLICA PORTUGUESA. **Aviso n.º 22602/2024**. Diário da República, 2.ª série, 2024. Disponível em <https://diariodarepublica.pt/dr/detalhe/aviso/22602-2024-890538651>. Acesso em: 14 dez. 2024.

Universidade Católica Portuguesa. **Plano de estudos da licenciatura em enfermagem**. Universidade Católica Portuguesa, 2024. Disponível em <https://enfermagem.porto.ucp.pt/pt-pt/licenciatura-em-enfermagem/plano-de-estudos>. Acesso em: 14o-de-estudos. Accessed on: 14 Dec. 2024.