

The teaching of bioethics and the thematic choices of students

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Abstract

The teaching of Bioethics in the curricular unit of Ethics II of a nursing degree course in Setúbal, Portugal, from 2008/2009 to 2016/2017, was based on the premise of the students' free choice to study and deepen their knowledge of the topic. In this article, we contextualized this pedagogical practice, identifying and analyzing the students' choices, problematizing changes over the course of nine academic years in a short relationship with debates in civil society and changes in bylaw. The most commonly chosen themes were beginnings of life (voluntary pregnancy, surrogate gestation), end-of-life (euthanasia, dysthanasia) and biotechnologies (donation and organ transplantation). The conclusions suggest the themes were chosen due to the relationship between bioethics and professional training, but also a bioethical education for citizenship.

Keywords: Bioethics. Ethics. Education, nursing.

Resumo

Do ensino da bioética e as escolhas temáticas dos estudantes

O ensino da bioética no curso de licenciatura em enfermagem, em Setúbal, Portugal, na unidade curricular de Ética II, desde o ano letivo 2008/2009 a 2016/2017, ancorou-se na premissa da livre escolha pelos estudantes do tema para estudo e aprofundamento. Neste artigo, contextualizamos essa prática pedagógica, identificamos e analisamos as escolhas dos estudantes, problematizamos mudanças no decurso de nove anos letivos em breve relação com debates na sociedade civil e alterações do biodireito. Os temas mais escolhidos referiam-se a início de vida (interrupção voluntária de gravidez, gestação de substituição), fim de vida (eutanásia, distanásia) e biotecnologias (doação e transplante de órgãos). As conclusões apontam a relação entre bioética e formação profissional nas temáticas escolhidas e também a educação bioética para a cidadania.

Palavras-chave: Bioética. Ética. Educação em enfermagem.

Resumen

La enseñanza de la bioética y las elecciones temáticas de los estudiantes

La enseñanza de la Bioética, en la carrera de Licenciatura en Enfermería, en Setúbal, Portugal, en la unidad curricular de Ética II, desde el ciclo lectivo 2008/2009 a 2016/2017, se ancló en la premisa de la libre elección por parte de los estudiantes del tema para su estudio y profundización. En este artículo, contextualizamos esta práctica pedagógica, identificamos y analizamos las elecciones de los estudiantes, problematizamos los cambios en el transcurso de nueve años lectivos en una breve relación con los debates en la sociedad civil y las alteraciones del Bioderecho. Los temas más escogidos, al comienzo, fueron: la vida (interrupción voluntaria del embarazo, gestación de sustitución), el fin de vida (eutanasia, distanasia) y las biotecnologías (donación y trasplante de órganos). Las conclusiones abordan la relación entre Bioética y formación profesional en las temáticas escogidas y también la formación bioética para la ciudadanía.

Palabras clave: Bioética. Ética. Educación en Enfermería.

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Declara não haver conflito de interesse.

In the teaching of bioethics, several approaches are employed which constitute “practices in use” for the training in the health area, in both undergraduate or graduate courses. Considering the existence of particularities in the teaching of bioethics, it is natural there to be additional concern with pedagogical practices, both with regard to conception and implementation as well as in monitoring and evaluation.

We consider bioethics as a field of study and transdisciplinary reflection, *a set of investigations, discourses and practices (...), aiming to clarify or solve ethical issues raised by the advancement and application of biomedical technosciences*¹. Or, if preferred, *the systematic study of the moral dimensions - including moral vision, decisions, conduct, and policies - if the life sciences and health care, employing a variety of ethical methodologies in an interdisciplinary setting*².

One advances a little further by including in the bioethical reflection what affects people and their *common home*, the planet, seeking sustenance in principles and values that evidence the reflection on the development of sciences and biotechnologies. In this, we take identity and integrity, as well as sustainability into account, for now and for the next generations, insisting on a “common morality” facing the future of technological civilization³.

We are convinced that there is no *specific pedagogical tradition or a consolidated didactic experience*⁴, either considering interdisciplinarity - *there are several proposals for (...) pedagogical approaches, [such as] exposition of problem situations, internet forum, use of films, blog production, alternative production workshops, among others*⁵ -, or considering the way of thinking, *a privileged and specific expression of a long humanistic tradition in a scientific-technological civilization*⁶.

It has been recognized that the advances of biotechnologies and their application to the human being raise moral questions about the limits of the exercise of the health professions. The different models of professional relationship, interprofessional relations, the value of the principle of autonomy, the beginning and the end of life, the limitation of therapeutic efforts and the role of the State in public health policies are some examples of the importance of the social debate that can and should exist on these bioethical issues. Such issues require the introduction of curricular contents that contemplate the rigorous and comprehensive

analysis of these problems and their ethical, legal and social repercussions.

In the case we present, it is the teaching of a curricular unit in the undergraduate course in nursing, proposing to carry out a longitudinal analysis of the pedagogical practice. Thus, according to the logics of longitudinal analysis, we define as objectives for this article:

- To identify the thematic choices of students of a nursing course during the teaching of bioethics throughout the academic years of 2008/2009 to 2016/2017, corresponding to the consolidation of the study plan appropriate to Bologna. Considering that the students choose the subjects of the work without previous orientations that condition the choice, and the proposal of the students having always been accepted (the students were later guided to perform the study and had support in tutorial guidance), we consider relevant to analyze the chosen themes;
- To problematize any changes or differences in the course of these years. For this second objective, there will be a brief analysis of the themes discussed in civil society. This is because for many students the choice of topic was also related to the ongoing social debate, being an opportunity to know and deepen a certain subject, although for some, it was the theoretical classes that aroused interest in a specific topic.

The curricular unit: aims, program and methods

We teach a curricular unit on bioethics, called “Ethics II”, to undergraduate nursing students from the Higher School of Health of the Polytechnic Institute of Setúbal (“Escola Superior de Saúde do Instituto Politécnico de Setúbal”), Portugal, offered in the first semester of the third year. This unit is part of the “Ethical, bioethical, deontological and legal reasoning” course, which runs through the four years of the degree, including curricular units that focus on ethical, deontological and legal issues. Thus, students have been through the “Ethics I” and “Health and Nursing Law” courses in the first year, and also “Professional Deontology I” in the second year, “Ethics II” in the third year and “Professional Deontology II” in the fourth year.

The purpose of the “Ethics II” curricular unit is to contribute to an integrative vision of bioethics, in relation to the ethical issues of professional practice, promoting their identification, discussion and resolution. It was created in the academic year 2008/2009, following the restructuring of the curriculum, within the framework of the Bologna process, the European intergovernmental reform aimed at creating the European Higher Education Area. As stated in the preamble to the legislation, *a central issue in the Bologna Process is that of changing the paradigm of teaching from a passive model based on the acquisition of knowledge to a model based on the development of competences, instrumental, interpersonal and systemic - or those of a specific nature associated with the training area*⁷.

We established four learning objectives for the student: 1) to develop knowledge about bioethical problems; 2) to practice reflection and debate on bioethical problems; 3) to deeply analyze bioethical themes; and 4) to improve the capacity for rational decision-making in the face of problems arising from the nursing practice, under a pluralistic and transdisciplinary approach. If we take into account that, classically, bioethics deals with the ethical problems related to the application of biotechnologies, we find topics on the beginning and end of human life, medically assisted reproduction, surrogate gestation, genetic engineering, research on human beings, and transplantation of organs and tissues. In this scope the application of ethical principles and values, appropriate to new situations generated by the progress of the biomedical sciences are discussed⁸.

Assuming that all aspects of the development of the life and health sciences can be inscribed in bioethics, the program contents include nine topics, all of considerable breadth. These are: 1) bioethics - fundamentals and main theoretical models; 2) bioethics and the beginning of life; 3) bioethics and the end of life; 4) collection and transplantation of organs and tissues and inter-living and postmortem donation; 5) the person and the development of biotechnologies; 6) bioethics and mental health; 7) experimentation in humans and clinical trials; 8) animal experimentation; 9) bioethics and public policies.

The course unit has a workload of 54 hours (2 ECTS), with 40 hours of teaching contact, distributed into theoretical classes (30 hours), seminar (5 hours) and tutorial orientation (5 hours). If we cross the typology of classes with the established attendance regulations, students do not have compulsory

attendance in theoretical classes and may miss up to 20% of seminar classes and tutorial orientation. The teaching-learning strategies we use include the expository, participative and reflexive method, as well as research and reflection dynamics.

There are three areas of work in the curricular unit, which converge to the individual final paper, and for which the chronology is distributed as follows along the semester (which has eighteen weeks, and the course can take fifteen or sixteen): 1) in the first three weeks, we present the theoretical-methodological framework of bioethics, with its theoretical models, focus on the transdisciplinarity of themes and inclusion of argumentative and plural perspectives; 2) from the fourth to the fifteenth week there are theoretical classes with discussion of the program themes, based on the systematized analysis of opinions of the National Council of Ethics for Life Sciences (Conselho Nacional de Ética para as Ciências da Vida - CNECV) - this work is carried out by groups composed by a maximum of five students and the presentation of the “analysis of opinions” may make use of the fact sheet, description and analysis of the text of the opinion, as well as other texts, books, films, articles from journals or newspapers and debates on the public opinion; 3) from the eighth week, weekly tutorial sessions take place, after the students have chosen the topic they are going to study.

The continuous evaluation method varied over the years with regard to instruments and weights, and these changes resulted from the analysis of previous evaluations and the search for improvement. The proposals were:

- In 2008/2009 and 2009/2010, individual paper, in the form of a thematic essay or critical review (90%) and group work in the form of a comparative analysis of sources related to the topic of the program (10%).
- In 2010/2011 and 2011/2012, individual paper in the form of a thematic essay or critical review (80% weighting) on the topic of the program and resorting to the analysis of sources (20%). Despite the difficulty expressed by the students, the comparative analysis of the sources allowed to select reliable texts to deepen the themes.
- In 2012/2013, it was agreed with the students to carry out individual or small group projects of subject analysis, using bibliographical review and presented in scientific article format. Thus, in that year, we began to consider the possibility of one or two authors.

- In 2013/2014, the analysis of the opinions in a group, which were discussed in the classroom, started having weight (25%) in the summative evaluation, maintaining the individual or pair work of topic analysis, using a bibliographical review and in scientific article format, of which the assessment could comprise 75% of the grade.
- In 2014/2015, the weights were changed (30% for the analyses of opinions and 70% for the individual or pair work), maintaining the analysis of a theme chosen from the contents of the curricular unit. We added the diversity requirement of the themes, which could not coincide in the analysis in the individual work and group discussion, in the study of opinions.
- In 2015/2016 and 2016/2017, the weights of the two elements of evaluation were changed again, to 40% for the analysis of opinions, with presentation and discussion throughout the classes, in groups, and 60% for individual or pair work of topic analysis.

Despite these changes (something like “fine tunings” resulting from the evaluation), in these nine school years we have always maintained a common element: the choice of the theme of the work done by the students. Although the evaluation of each type of task and the conditions of continuous evaluation were modified, the freedom of choice of students was preserved to analyze and deepen the subject that they considered pertinent.

Academic results

The curricular unit is taught in the first semester of the third year. Most students are between the ages of 20 and 23, with ages ranging from 24 to 27, and a few older students entered by the “over 23” group. There are no requirements or precedence to study the discipline which, as indicated, belongs to the curricular units transversal axis from the first to the fourth year (axis of ethical, bioethical, deontological and legal reasoning).

It was observed that, in general, the subject attracted student interest and participation - in the nine academic years, of the 426 students enrolled (mean of 47 per year), 389 were assessed and 383 passed, with a total of 37 not having been evaluated (8.6%) and six failed (1.4%). It can be considered that the course had great academic success - with an average of 91% of students passing, 92% of the students enrolled being

assessed and 98.8% of these passing. The average of the classifications is 16, on a scale of 0 to 20. In the satisfaction questionnaires filled out by the students at the beginning of the following semester, the scores on the items under evaluation and academic success make it a curricular unit “of good practices”.

Thematic choices: presentation and analysis

Most students chose the subject they would study and delve into in the first six weeks of the semester. However, it is important to keep in mind that some of them, in the third year of the undergraduate nursing course, had concerns or issues and often also chose the subject of work to know more and analyze arguments on a specific subject.

In this curricular unit there are no “recommendations” or “lists of subjects” or suggestions by the teacher that aim to “support” student choice. Between the sixth and seventh week of the semester, the teacher collects the list in which the students write their names and chosen theme, and the theme can be changed until the due date for the project. In such cases, the student only needs to confirm that the new topic is in the course syllabus.

To point out that the intended theme is more aimed at promoting the orientation of the study than setting the subject. In the tutorial orientation it is explained that the work will benefit if its approach includes at least the following topics: 1) contextualization of the subject, resorting to current data and indicators (even if it seems to have a certain “epidemiological” character, it is important for the bioethical reflection to be based on scientific data and evidence) and clarifying the problem; 2) presentation of the legal and formal framework of the theme, in Portugal and in other countries; 3) identification and deepening of the principles and values in question; 4) exploration of favorable and unfavorable arguments (as in thesis and antithesis); 5) positioning the student’s understanding and reflection at the end. If two students decide to do the group work, they do not need to reach unanimity in the final reflective position, but they have to make their arguments clear.

In these nine school years, 274 studies were produced. The themes chosen represent 68 subjects, analyzed from the point of view of bioethical issues. We group themes by affinity into the ten thematic areas summarized below.

Beginning of life

In this thematic area we include voluntary termination of pregnancy (VTOP), surrogate pregnancy, medically assisted reproduction (MAR), the statute of the embryo, the definition of early life, surplus embryos, use and study of stem cells (embryonic stem cells) and germinative cells. "Stem cells", "posthumous use of gametes", "genetic counseling", "sex selection of the child", "embryos and stem cells" and "pre-implantation genetic diagnosis (PIGD)" were also included. In total, 11 subjects related to early life were approached by students (Table 1).

The topic chosen the most often was the VTOP (20 papers), followed by the themes of pregnancy (10), MAR (10), embryo status (8) and stem and germinative cells (7). In relation to Table 1, if we associate MAR and surrogate pregnancy, the frequency is similar to that of VTOP (20), with the two topics being chosen the most. It is the thematic area that received the greatest number of choices (65, that is, 23.7%), appearing in all school years, although with differences over the period.

Of the years with higher frequencies, in 2008 and 2009 students focused mainly on VTOP; in 2009 and 2010, the use and study of stem and germinative cells; and in 2011 and 2012, medically

assisted reproduction and statute of the embryo. There are themes that appear more at the beginning of the nine-year period and then go extinct (in case of genetic counseling, child sex selection and PIGD); there are others that emerge more in later years, such as the posthumous use of gametes and the questioning of early life (in 2015 and 2016).

End of life

In this thematic area we consider euthanasia, assisted suicide, medically assisted death, anticipated directives of will, dignity at the end of life, decision or indication of non-resuscitation, palliative care, orthothanasia and dysthanasia, the person's will at the end of life, dysthanasia/therapeutic obstinacy and therapeutic futility (10 themes). Among the most chosen topics are euthanasia (24), followed by the topic associated with dysthanasia/therapeutic obstinacy (8), end-of-life dignity (7), assisted suicide (5), advance directives of will (5). If we consider those of similar content, dysthanasia/obstinacy and therapeutic futility add up to 11 studies, and dignity at the end of life and palliative care becomes the second most chosen, with 12 studies. Those related to assisted death (euthanasia, assisted suicide, medically assisted death) are at the center of 30 studies (Table 1).

Table 1. Distribution of the most frequent theme choices

Area	Subject analyzed	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	Total	f	%
Beginning of Life [Bol]	Voluntary termination of pregnancy (VTOP)/ abortion	7	1	2	2		2	2	2	2	20	65	23,7
	Surrogate maternity/ pregnancy	1	2	1		1	1	1	1	2	10		
	Medically assisted Reproduction (MAR)			2	4	2	2				10		
	Statute of the embryo		2		3	1	1			1	8		
	Use and study of stem and germinative cells		3			1			1	2	7		
	Surplus embryos		1	2					1		4		
	Pre-implantation genetic diagnosis (PIGD)	1	1								2		
	Posthumous use of gametes								1		1		
	Bioethics and the beginning of life									1	1		
	Genetic counseling		1								1		
	Sex selection of the child		1								1		

Area	Subject analyzed	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	Total	f	%
End of Life [EoL]	Euthanasia	5	1	2	6	3	2	3	1	1	24	63	23,0
	Dysthanasia/ Therapeutic Obstinacy	1	2	1	2		2				8		
	End of life/Dignity in EoL		2	3			1		1		7		
	Assisted suicide			1	1	1		1		1	5		
	Advance directives of will/FdV will		2		1				1	1	5		
	Palliative care		1	2			1			1	5		
	Decision not to reanimate/INR		1				1		2		4		
	Therapeutic futility		1					2			3		
	Euthanasia, orthoethanasia, dysthanasia						1				1		
	Medically assisted death									1	1		

Very close to “the beginning of life”, with 63 papers (23%), the end-of-life question was also chosen in all school years. Of the years with more homogeneous choices, in 2008/2009 and in 2011/2012 euthanasia was the prevalent subject in this thematic area. Some arise in 2009 and 2010 and reappear in the following years (as “advance directives of will”) or only in the last year in new formulation (medically assisted death).

Biotechnologies

This topic includes post-mortem collection and transplantation; inter vivos donation, collection and transplantation; xenotransplantation; therapeutic cloning and human cloning; biotechnology, genetically modified and transgenic organisms; synthetic biology, human improvement and genetically modified food; and relationship between cyborgs and humans, totaling seven themes (Table 2).

The most frequently chosen themes were brain death and post-mortem donation and transplantation (25), followed by inter vivos donation and transplantation (10) and those associated with genetically modified organisms and synthetic biology (7). In the years with more homogeneous choices, in 2010 and 2011, there was more focus on donating and transplanting post-mortem, a theme present in the nine years; in 2016 and 2017, on inter vivos donation, collection and transplantation. There are

themes that appear in the early years (in the case of GMOs), others that appear more in the end (synthetic biology, human improvement, cyborgs). It is clear that the number of choices increases and disperses thematically in the last two school years (Table 2).

Society

In this category we include bioethical issues discussed in Portuguese society, such as adoption in homoparentality, death penalty, marketing of organs of living donors, the statute of women, HIV/AIDS situation, poverty and social exclusion, bioethics literacy (capacity to understand concepts and discussion in this field), domestic violence, bullfighting, eugenics, drug rationing and corporate social responsibility, in a total of 12 themes (Table 2).

The most frequently chosen theme was adoption by same-sex couples, or homoparentality (10), followed by death penalty (7), and poverty and social exclusion (2). Of the years with the highest frequency of certain choices, in 2009/2010 there was a focus on homoparental adoption, a topic present in six of the nine years; in 2013/2014, the death penalty was the most prominent. There are some themes that appear at the beginning and remain in almost every year (adoption and the death penalty), and others that appear at the end (bullfighting, domestic violence).

Table 2. Distribution of intermediary frequencies of theme choices

Area	Subject analyzed	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	Total	f	%
Biotechnologies	Donation and transplantation – post-mortem	2	3	5	3	2	3	2	2	3	25	47	17,2
	Donation and transplantation – inter-vivos	1	2		1	1	1		1	3	10		
	Biotechnologies, GMOs and transgenics		1						2	1	4		
	Xenotransplantation		1						1		2		
	Synthetic Biology/ SB and human improvement					1			2		3		
	Cloning (human, therapeutic)							1	1		2		
	Cyborgs and humans									1	1		
Society	Homoparentality/ adoption	2	3	1		1	1	2			10	28	10,2
	Death penalty	1		1			2	1	1	1	7		
	Poverty and social exclusion						2				2		
	Organ trade in living donors							1			1		
	Domestic violence									1	1		
	Women's statute								1		1		
	HIV and AIDS						1				1		
	Literacy in bioethics							1			1		
	Bullfighting								1		1		
	Eugenics							1			1		
	Drug rationing					1					1		
	Corporate social responsibility		1								1		
	Experimentation in humans	2	2	3	2	2					11		
Investigation	Clinical trials/exp with human beings	3	1	2	2	1					9	27	9,9
	Human genetics/genomics/genome	2	1	1							4		
	Therapeutic use of cannabinoids								1		1		
	Experimentation in human embryos			1							1		
	Cryopreservation of stem cells	1									1		

Investigation

We include clinical trials and pharmacological testing in humans; experimentation in humans; experimentation in human embryos; cryopreservation of stem cells; human genetics, genomics, human genome design; and therapeutic use of cannabinoids, totaling six themes (Table 2). The most frequently chosen themes were experimentation in humans (11) and clinical trials (9), following the genomic/human genome (4).

Of the years when certain choices were more frequent, in 2009/2010 and 2010/2011 there was more interest in human experimentation and pharmacological trials in humans (5 in each year). Most themes appear in the initial years of the period

under study start going extinct from 2012/2013; moreover, it is clear from the table that theme choices have been extinguished in recent years, with the exception of the more recent therapeutic use of cannabinoids.

Mental health

Here we considered compulsory hospitalization; mental health, mental health stigma; physical restraint, violence and physical restraint in mental health; transsexuality; electroconvulsive therapy; psychiatric deinstitutionalization; and assisted injection rooms, totaling seven themes (Table 3). The most chosen were compulsory hospitalization (4) and transsexuality (3).

Table 3. Distribution of the least frequent theme choices

Area	Subject analyzed	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	Total	f	%
Mental health	Compulsory hospitalization	1	1		1			1			4	14	5,1
	Transsexuality		1			1			1		3		
	Mental health/stigma in mental health	1							1		2		
	Physical restraint		1	1							2		
	Electroconvulsive therapy		1								1		
	Psychiatric deinstitutionalization		1								1		
	Assisted injection rooms			1							1		
Consent	Consent	1	3				2				6	8	2,9
	Refusal of treatment for religious reasons								1		1		
	Informed consent in mental health	1									1		
Environmental	Animal experimentation					1	2	1	1	1	6	8	2,9
	Ethical implications of water use									2	2		
Pediatric ethics	Pediatric palliative care		1		1	1					w3	7	2,6
	Neonatal resuscitation				1	1					2		
	Immunization of minors						1				1		
	Pediatric end of life			1							1		
Sexual and reproductive health	Maternity and paternity in adolescence	1	1								2	7	2,6
	Female genital mutilation	1									1		
	Sexuality in adolescence	1									1		
	Sexual education		1								1		
	Family planning	1									1		
	Emergency contraception							1			1		
		37	48	33	30	24	29	19	28	26	274	274	100

Consent

Here we included consent, refusal of treatment for religious reasons and informed consent in mental health, comprising three themes. The first was the most chosen (Table 3).

Pediatric ethics

Pediatric palliative care, neonatal resuscitation, immunization of minors and pediatric end-of-life are part of this topic (Table 3). The most chosen was pediatric palliative care (3), followed by questions related to neonatal resuscitation (2). Work in this area was carried out between 2009/2010 and 2013/2014, and did not appear in the following years.

Sexual and reproductive health

Here we included family planning, female genital mutilation, sexuality in adolescence, sexual education, maternity and paternity in adolescence and emergency contraception, a total of six subjects (Table 3). The most chosen was maternity and paternity in adolescence (2). This area was selected in 2008/2009 and 2009/2010, presenting only one more occurrence in the following years.

Environmental

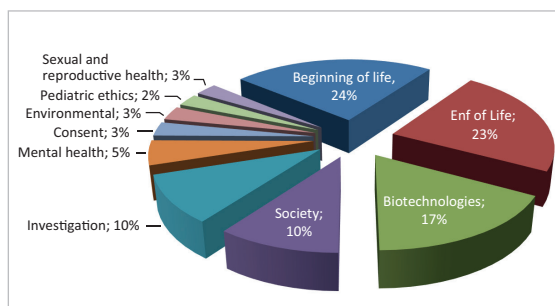
Animal experimentation was the subject of six studies, and two others dealt with the ethical implications of water use (Table 3). Interest in the area arose in 2012/2013, the most recent being the water use choice (2016/2017).

In the period studied, the predominance of the choice of the subject related to early life (23.7%), with a proportion very close to the end of life (23%) - together, these represent 46.7% of the choices. In third, we had biotechnologies (17.2%), with cumulative frequency of 63.9%. In descending order are topics related to society (10.2%); research (9.9%); mental health (5.1%); consent and environmental ethics (both chosen by 2.9% of the students); pediatric ethics and sexual and reproductive health (2.6% each), as can be seen in Chart 1.

If a few years ago the beginning and end of life had the highest frequencies (peaks in 2009 and 2011), more recently biotechnologies, research and environmental ethics have received more attention. In fact, the first theme of environmental ethics dates back to 2014 and the rise of biotechnologies in 2015.

Notwithstanding the difference in the number of papers per year (also dependent on the nature of the work, whether individual or in pairs), the issues remain relatively stable. The interest is residual in dealing with subjects of the curricular units of nursing itself addressed in the disciplines Mental Health, Sexual and Reproductive Health, Child and Young, taught in concomitance to the discipline Ethics II, scenario of this research. It is observed that, more recently, these areas have lower and/or zero frequencies.

Chart 1. Distribution of frequencies of the thematic areas chosen.



Thematic choices: discussion and problematization

The third year students of the undergraduate nursing course are young adults inserted in the social and cultural environment of the region and the country, as well as the whole world, as a result of new technologies. Students choose the subject between October and November, and it is plausible to consider the influences in that same year or from the previous one to frame the choices. The debates that are taking place, the legislative changes that often follow, are news and center of attention of the communities. Let us consider the definition of Christian Lavalie, who states that *biolaw is no more than an instrument for regulating the social consequences of technological advances*⁹ and that the transposition of consensus on the principles and practices accepted by legislation is socially and culturally relevant. Therefore, we will return to the subject areas at the same time as we very synthetically sketch the contextual scenario of Portugal in those years.

Beginning of life

In this field, the study on the voluntary termination of pregnancy, a recurring topic in the

last decade, was highlighted. Legislation¹⁰ of 1984 had ruled out the illegality of voluntary termination of pregnancy in cases of danger to the woman's life, danger of serious and lasting injury to the physical and mental health of the pregnant woman in cases of fetal malformation or when the pregnancy resulted from rape. In 1997 the legislation was amended, extending the deadline for interruption in cases of fetal malformation and in situations of *crime against the freedom and sexual self-determination of the woman*¹¹.

After a national referendum, carried out on February 11, 2007, Law 16/2007¹² was published, which changed the Criminal code and removed the illegality of the voluntary termination of pregnancy, including an item concerning the woman's will up to the 10th week of pregnancy. This law was also regulated by two ordinances^{13,14}.

The Directorate-General for Health has published annual reports on termination of pregnancy in Portugal in which all situations of termination of pregnancy are evaluated. Whenever the report is released, the subject is somewhat taken up, given the published data - such as the fact that in 2015, as in previous years, most interruptions occurred at the woman's option in the first ten weeks¹⁵ -, or when new proposals or legislative changes appear^{16,17}. Ten years after the decriminalization, it is a subject that returns with some frequency to the attention of society.

The theme of MAR also has a course full of debates and discussions of draft laws. In 2006, with the publication of Law 32/2006¹⁸, in which the legislative text listed the MAR techniques that discipline, in particular: artificial insemination; in vitro fertilization; intracytoplasmic sperm injection; transfer of embryos, gametes or zygotes; pre-implantation genetic diagnosis; other laboratory techniques of equivalent or subsidiary gametes or embryonic manipulation.

In the 2006 wording, the law had as beneficiaries, in its article 6, *only married persons who are not legally separated from persons or property or separated de facto or those who, being of different sex, live in conditions similar to those of the spouses for at least two years can use MAR techniques. The techniques can only be used for the benefit of those who are at least 18 years of age and not interdict or disabled by psychic anomaly*¹⁸.

It should be noted that these techniques can not be used to alter non-medical characteristics of the unborn child, except in cases where genetic diseases are strictly related to the child's sex. The law raised opposition arguments and was the subject of a request for review to the Constitutional Court, which declared it constitutional in March 2009, when it began to be implemented. The legal provisions on marriage were amended in Portugal by Law 9/2010¹⁹, which allows for civil marriage between persons of the same sex. In 2012, bills to increase the number of beneficiaries began to be discussed and received attention in the Assembly of the Republic and in the media, mobilizing arguments and opinions of society.

In 2016, the publication of Law 17/2016 widened the scope of beneficiaries of medically assisted reproduction techniques, guaranteeing access to *all women regardless of the diagnosis of infertility*²⁰. The second amendment to Law 32/2006 was also carried out adding that *the MAR techniques may be used for couples of different sex or couples of women, respectively married or married or living in conditions similar to those of spouses, as well as all women regardless of marital status and their sexual orientation*²⁰.

The legislation in force establishes as prohibited purposes *reproductive cloning with the aim of creating genetically identical human beings (...) in order to improve certain non-medical characteristics of the unborn child, namely the choice of sex. Exceptions are (...) cases in which there is a high risk of genetic disease linked to sex, and for which direct detection by pre-implantation genetic diagnosis is not yet possible or when the need to obtain a human leukocyte antigen group (HLA) for the treatment of severe disease*²⁰. The law prohibits genetic manipulation to *originate chimeras or hybrids, and it is also prohibited to apply pre-implantation genetic diagnosis techniques in multifactorial diseases [for which] the predictive value of the genetic test is very low*¹⁸.

Among the proposals discussed in the draft decree-law, which may be a separate issue, surrogate pregnancy was widely debated in the country in the last two years, before and after the publication of Law 25/2016 that regulated access to it. This law prescribes that this type of pregnancy *is only possible with an exceptional and gratuitous nature, in cases of*

*absence of uterus, injury or disease of this organ that absolutely and definitively prevents the pregnancy of the woman or in clinical situations that justify that*²¹. In addition, such a strategy can only be authorized by means of a medically assisted reproduction technique using the gametes of at least one of the respective beneficiaries, and in no case may the pregnant woman be the giver of any oocyte used in the concrete procedure in which she participates²¹.

Medically assisted reproduction techniques, including those used in surrogate pregnancy situations, should respect the human dignity of all persons involved. In addition, discrimination based on genetic heritage or on the fact of being born using MAR techniques is prohibited.

End of life

The theme most frequently chosen was euthanasia, assisted suicide and, in 2016/2017, the topic of medically assisted death also being emphasized. The social debate over the end of life has grown in recent years, with visibility for discussions about living will and early directives of will. Law 25/2012, published on July 16, *regulates the advance directives of will, namely in the form of a living will, and the appointment of health care I and creates the National Registry of Living Will*²².

In the discourses, references to therapeutic obstinacy, dysthanasia, therapeutic futility, free choice and anticipated will were frequent. In 2012, the palliative care bases law was published²³, and a “Strategic plan for the development of palliative care: biennium 2017-2018” is currently defined²⁴. In December 2015, the petition of the civic movement “Right to die with dignity”²⁵ was registered, which has been followed by several public petitions for and against medically assisted death. The CNECV, in 2017, is organizing a cycle of debates throughout the country, beginning in May and ending in December, under the theme “Deciding on the end of life”²⁶, which counts on the High Sponsorship of His Excellency the President of the Republic of Portugal.

Research and biotechnology

We combined these areas because we verified that, from our analysis, “research” was focused more often in the early years, while “biotechnology” was the subject of more recent choice. In “research”, pharmacological experimentation in humans and

clinical trials received more attention, and issues associated with genomics/human genome appear only at the beginning of the study period.

In Portugal, Law 46/2004 *approved the legal regime applicable to the performance of clinical trials with medicinal products for human use*²⁷, transposing into national legislation the content of Directive 2001/20/CE²⁸. It also created the Commission for Research Ethics Clinic (Comissão de Ética para a Investigação Clínica), which, as of June 2005, became the competent authority to issue an opinion on the conduct of clinical trials with medicinal products for human use. It is *an independent body made up of health-related individuals and other areas of activity whose main task is to ensure the protection of the rights, safety and well-being of participants in clinical trials by issuing an ethical opinion on the investigation protocols submitted to it*²⁹.

Ten years later, the clinical trials of medicinal products for human use were regulated in Portugal by the so-called Clinical Investigation Law (Lei de Investigação Clínica)³⁰, amended the following year³¹. This law covers clinical trials, among other studies, defined as *any research conducted in humans, intended to detect or verify the clinical, pharmacological or other pharmacodynamic effects of one or more experimental medicinal products or to identify the undesirable effects of one or more experimental medicinal products or to analyze the absorption, distribution, metabolism and the elimination of one or more investigational medicinal products in order to ascertain their safety or efficacy*³².

The innovation introduced by this law was the creation of the National Registry of Clinical Studies (Registo Nacional de Estudos Clínicos) as a tool to register and disseminate all clinical trials involving human beings performed in Portugal. The registry encompasses, among other things, studies of a clinical nature with medications, medical devices and cosmetic and personal hygiene products.

In the topic of biotechnologies, the most frequently chosen areas were brain death and post-mortem donation and transplantation, followed by inter vivos donation and transplantation. Concerning the area of transplantation in Portugal, Law 12/1993 on the collection and transplantation of organs and tissues of human origin has been applied to *acts of which the purpose purpose is the donation or collection of tissues or organs of human origin for diagnosis or*

for therapeutic and transplantation purposes, as well as to the transplantation interventions themselves³³.

This first law, of 1993, was regulated with the National Registry of Non-Donors (Registo Nacional de Não Dadores)³⁴ and the criteria of cerebral death³⁵; six years later, Law 141/1999³⁶ established the principles of verification of death. Changes to the law on organ donation and transplantation occurred in 2007³⁷, 2009³⁸ and 2013³⁹, resulting from the transposition of European directives into the national legal order, as well as in 2016 and 2017. In a search the CNECV website for the word “transplante” (transplantation)⁴⁰, we identified 12 opinions produced between 2003 and 2017, which shows changes to legislation and the bioethical debate on the subject.

In Portugal, the issue of post-mortem donors was much discussed - at the end of 2013 an ordinance was published that determined the *necessary requirements for the harvest of organs in deceased donors in cardiocirculatory arrest*⁴¹. It should be noted that Portuguese law allows any donor of living organs, regardless of whether there is a relationship of consanguinity - this process always requires interviewing the donor and the recipient, as well as complete clinical, social and psychological evaluation of the donors. The Verification Authority for the Admissibility of Harvest for Transplant (Entidade de Verificação da Admissibilidade da Colheita para Transplante) was created in 2007⁴² and exists in each hospital where transplants are performed.

We also point out the campaigns to promote life donation, starting in 2012, including the slogan “donating a kidney does good for the heart”, as well as the legislative amendment⁴³ that allowed cross-renal transplantations. Data released⁴⁴ indicate that the highest number of transplants in the last five years was recorded in 2016, and it was widely reported that in 2015 Portugal was the fourth country in the world with the largest number of donations per million inhabitants.

Society

All themes included in this section represent social topics such as homoparentality, death penalty, marketing of living donor agencies, women’s status, HIV/AIDS status, poverty and social exclusion, bioethics literacy, domestic violence,

bullfighting, eugenics, drug rationing and corporate social responsibility. Some of them coincide, chronologically, in the students’ choices and in their discussion in the country, as was clearly the case with homoparental adoption, following the authorization of same-sex civil marriage (which came into force in June 2010)¹⁹ of adoption and coadoption (approved in December 2015).

Mental health, pediatric ethics and sexual and reproductive health

In the same semester, the curriculum of the Higher School of Health includes three curricular units of nursing (V, VI and VII) directed to mental, child and pediatric health topics (themes chosen between 2009/2010 and 2013/2014) and health sexual and reproductive health (between 2009/2010 and 2010/2011). Thus, some students chose subjects of these areas for bioethical deepening, predominantly in the first years of the study period.

Among these, compulsory hospitalization, mental health, pediatric palliative care and maternity and paternity in adolescence are highlighted. In addition to the study plan, it is possible to cross the choices with problematic issues in the country, be it regarding mental health, subject of a memorandum and opinion of the CNECV in 2014 (bioethics and mental health 45), or pediatric ethics, since the first unit pediatric palliative care - “The Castle” (O Castelo) - was opened in Matosinhos in 2016.

Environmental

This was the most recent area of choice, highlighting animal experimentation and water use, in the academic year 2016/2017, associated to the document “Access to water: ethical implications of a fundamental right”, produced by the CNECV in a publication which opened the subject, *highlighting a principle of justice in the distribution of this scarce resource, but also in the recognition that the relation of human beings to the environment has a moral dimension that goes beyond a merely utilitarian view of an appreciable good*⁴⁶.

Final considerations

During the nine years studied, the students most frequently chose the following items: early

life (voluntary termination of pregnancy, surrogate pregnancy, medically assisted reproduction), end of life (euthanasia, dysthanasia, dignity at the end of life). With intermediate frequency, they selected biotechnologies (donation and transplantation of postmortem and inter vivos organs), society (homoparentality, capital punishment) and research (human experimentation, clinical trials). And less frequently: mental health, consent, environmental ethics, pediatric ethics and sexual and reproductive health.

The teaching of bioethics can also be seen as a strategy for the informed participation of the public. The choice of some subjects seems to be directly related to ongoing debates in the country, such as the adoption by homosexual couples, medically assisted reproduction, surrogate pregnancy, VTOP and euthanasia/medically assisted death. There are less frequent choices, such as bullfighting, animal experimentation, human improvement, or immunization of minors.

The autonomy of students to choose the subjects allows to analyze and to debate this selection, as well as the reasons to express certain interests. Theories of meaningful learning support these methods, making room for the study to be meaningful for students, in their academic lives or

as citizens. A curricular unit that aims to develop competences in the bioethical analysis and discussion of themes associated with the development of life and health sciences, biotechnologies and collective morality can be appreciated every academic year, in its immediate result.

Despite this, there is merit in conducting longitudinal analyzes, either by understanding the impact of the curricular unit, or by the awareness of the personal and academic training of students, in this case, future nurses. This is particularly relevant in view of the close correlation between bioethics and citizenship. We believe that this pedagogical method allows us to go far beyond the mere accomplishment of the study plan, contributing to the personal development, the bioethical literacy of the nurses and the construction of active, informed and inquisitive citizenship.

The teaching and learning of bioethics is in close proximity to the values of citizenship, and we need citizens and professionals who exercise their power to judge, who know how to think and discern, see the problems from a community perspective, participate and commit themselves - with themselves, with others and with the world.

Referências

1. Parizeau MH. Bioética. In: Hottos G, Parizeau MH, organizadores. Dicionário da bioética. Lisboa: Instituto Piaget; 1993. p. 88-9.
2. Reich WT. Encyclopedia of bioethics. New York: Macmillan; 1995. t., I, p. xxi.
3. Ascensão JO. Estudos de direito da bioética. Coimbra: Almedina; 2012. v. IV. p. 343-50.
4. Lima ACT. Sobre o ensino da bioética: um desafio transdisciplinar. *Nascer Crescer*. 2010;19(2):102-8. p. 106.
5. Fischer ML, Cunha TR, Roth ME, Martins GZ. Caminho do diálogo: uma experiência bioética no ensino fundamental. *Rev. bioét. (Impr.)*. 2017;25(1):89-100. p. 90.
6. Neves MCP, Osswald W. Bioética simples. Lisboa: Verbo; 2007. p. 19.
7. Portugal. Decreto-Lei nº 74, de 24 de março de 2006. Aprova o regime jurídico dos graus e diplomas do ensino superior [Internet]. *Diário da República*. Lisboa; nº 60/2006, série I-A, 24 mar 2006 [acesso 11 agosto 2017]. Disponível: <http://bit.ly/2hwkhvU>
8. Clotet J. Por que bioética? *Rev. Bioética*. [Internet]. 1993 [acesso 12 jul 2017];1(1):8-14. Disponível: http://revistabioetica.cfm.org.br/index.php/revista_bioetica/article/viewFile/474/291
9. Lavalie C. De la difficulté à légiférer sur le vivant. In: Neirinck C. De la bioéthique au bio-droit. Paris: LGDJ; 1994.
10. Portugal. Lei nº 6, de 11 de maio de 1984. Exclusão de ilicitude em alguns casos de interrupção voluntária da gravidez [Internet]. *Diário da República*. Lisboa; nº 109/1984, série I, 11 maio 1984 [acesso 11 jul 2017]. Disponível: <http://bit.ly/2y5IHs3>
11. Portugal. Lei nº 90, de 30 de julho de 1997. Altera os prazos de exclusão da ilicitude nos casos de interrupção voluntária da gravidez [Internet]. *Diário da República*. Lisboa; nº 174/1997, série I-A, 30 jul 1997 [acesso 11 jul 2017]. Disponível: <http://bit.ly/2yEReht>
12. Portugal. Lei nº 16, de 17 de abril de 2007. Exclusão da ilicitude nos casos de interrupção voluntária da gravidez [Internet]. *Diário da República*. Lisboa; nº 75/2007, série I, 17 abr 2007 [acesso 29 ago 2017]. Disponível: <http://bit.ly/2fChV1w>
13. Portugal. Portaria nº 741-A, de 21 de junho de 2007. Estabelece as medidas a adotar nos estabelecimentos de saúde oficiais ou oficialmente reconhecidos com vista à realização da

- interrupção da gravidez nas situações previstas no artigo 142 do Código Penal. Diário da República. Lisboa; nº 118, série I, 1º suplemento, 21 jun 2007.
14. Portugal. Portaria nº 781-A, de 16 de julho 2007. Altera a Portaria nº 567, de 12 de junho de 2006, que aprova as tabelas de preços a praticar pelo Serviço Nacional de Saúde, bem como o respectivo regulamento, e aprova a lista de classificação dos hospitais para efeitos de facturação dos episódios da urgência. Diário da República. Lisboa; nº 135, série I, p. 4492, 16 jul 2007.
 15. Portugal. Direção-Geral da Saúde. Relatório dos registos das interrupções da gravidez: dados de 2015 [Internet]. Lisboa; 2016 [acesso 16 jul 2017]. Disponível: <http://bit.ly/2yqkKX8>
 16. Portugal. Lei nº 136, de 7 de setembro de 2015. Altera a Lei nº 16, de 17 de abril de 2007, sobre exclusão da ilicitude nos casos de interrupção voluntária da gravidez, visando a proteção da maternidade e da paternidade [Internet]. Diário da República. Lisboa; nº 174/2015, série I, 7 set 2015 [acesso 16 jul 2017]. Disponível: <http://bit.ly/2huQJm3>
 17. Portugal. Lei nº 3, de 29 de fevereiro de 2016. Revoga a Lei nº 134/2015 e Lei nº 136/2015 e dá outras providências [Internet]. Diário da República. Lisboa; nº 41/2016, série I, 29 fev 2016 [acesso 11 jul 2017]. Disponível: <http://bit.ly/2k3Ce9t>
 18. Portugal. Lei nº 32, de 26 de julho de 2006. Procriação medicamente assistida [Internet]. Diário da República. Lisboa; nº 143/2006, série I, 26 jul 2006 [acesso 11 jul 2017]. Disponível: <http://bit.ly/2xBS6rN>
 19. Portugal. Lei nº 9, de 31 de maio de 2010. Permite o casamento civil entre pessoas do mesmo sexo [Internet]. Diário da República. Lisboa; nº 105/2010, série I, 31 maio 2010 [acesso 11 jul 2017]. Disponível: <http://bit.ly/2hwLBh4>
 20. Portugal. Lei nº 17, de 20 de junho de 2016. Alarga o âmbito dos beneficiários das técnicas de procriação medicamente assistida, procedendo à segunda alteração à Lei nº 32/2006 [Internet]. Diário da República. Lisboa; nº 116/2016, série I, 20 jun 2016 [acesso 11 jul 2017]. Disponível: <http://bit.ly/2fDN5pt>
 21. Portugal. Lei nº 25, de 22 de agosto de 2016. Regula o acesso à gestação de substituição, procedendo à terceira alteração à Lei nº 32, de 26 de julho de 2006 (procriação medicamente assistida) [Internet]. Diário da República. Lisboa; nº 160/2016, série I, 22 ago 2016 [acesso 11 jul 2017]. art. 8º. Disponível: <http://bit.ly/2wU1F3v>
 22. Portugal. Lei nº 25, de 16 de julho de 2012. Regula as diretivas antecipadas de vontade [Internet]. Diário da República. Lisboa; nº 136/2012, série I, 16 jul 2012 [acesso 11 jul 2017]. Disponível: <http://bit.ly/2k3deiZ>
 23. Portugal. Lei nº 52, de 5 de setembro de 2012. Lei de bases dos cuidados paliativos [Internet]. Diário da República. Lisboa; nº 172/2012, série I, 5 set 2012 [acesso 11 jul 2017]. Disponível: <http://bit.ly/2fqTalv>
 24. Portugal. Comissão Nacional de Cuidados Paliativos. Plano estratégico para o desenvolvimento dos cuidados paliativos: biénio 2017-2018. Lisboa: Serviço Nacional de Saúde; 2016.
 25. Movimento Cívico Direito a Morrer com Dignidade. [11 jul 2017]. Disponível: <https://morteassistida.com/>
 26. Portugal. Conselho Nacional de Ética para as Ciências da Vida. Ciclo de debates [Internet]. 2017 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2hxhCG7>
 27. Portugal. Lei nº 46, de 19 de agosto de 2004. Aprova o regime jurídico aplicável à realização de ensaios clínicos com medicamentos de uso humano [Internet]. Diário da República. Lisboa; nº 195/2004, série I-A, 19 ago 2004 [acesso 11 jul 2017]. Disponível: <http://bit.ly/2hx6EQN>
 28. Parlamento Europeu, Conselho Da União Europeia. Directiva nº 2001/20/CE, de 4 de abril de 2001. Relativa à aproximação das disposições legislativas, regulamentares e administrativas dos Estados-Membros respeitantes à aplicação de boas práticas clínicas na condução dos ensaios clínicos de medicamentos para uso humano. Jornal Oficial das Comunidades Europeias. [s.l.]; L121, v. 44, p. 34, 1 maio 2001.
 29. Comissão de Ética para a Investigação Clínica. Missão [Internet]. 2015 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2hAmlgX>
 30. Portugal. Lei nº 21, de 16 de abril de 2014. Aprova a lei da investigação clínica [Internet]. Diário da República. Lisboa; nº 75/2014, série I, 16 abr 2014 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2wkQrRg>
 31. Portugal. Lei nº 73, de 27 de julho de 2015. Primeira alteração à Lei nº 21, de 16 de abril de 2014, que aprova a lei da investigação clínica, no sentido de fixar as condições em que os monitores, auditores e inspetores podem aceder ao registo dos participantes em estudos clínicos [Internet]. Diário da República. Lisboa; nº 144/2015, série I, 27 jul 2015 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2k1INcJ>
 32. Portugal. Op. cit. 16 abr 2014. art. 2º.
 33. Portugal. Lei nº 12, de 22 de abril de 1993. Colheita e transplante de órgãos e tecidos de origem humana [Internet]. Diário da República. Lisboa; nº 94/1993, série I-A, 22 abr 1993 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2xF7dXP>
 34. Portugal. Decreto-Lei nº 244, de 26 de setembro de 1994. Regula o registo nacional de não dadores [Internet]. Diário da República. Lisboa; nº 223/1994, série I-A, 26 set 1994 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2xAGkSV>

35. Portugal. Declaração. Declaração da Ordem dos Médicos prevista no artigo 12º da Lei nº 12, de 22 de abril de 1993 [Internet]. Diário da República. Lisboa; nº 235/1994, série I-B, 11 out 1994 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2fyWfU9>
36. Portugal. Lei nº 141, de 28 de agosto de 1999. Estabelece os princípios em que se baseia a verificação da morte [Internet]. Diário da República. Lisboa; nº 201/1999, série I-A, 28 ago 1999 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2yHIG9N>
37. Portugal. Lei nº 22, de 29 de junho de 2007. Transpõe parcialmente para a ordem jurídica nacional da Directiva nº 2004/23/CE do Parlamento Europeu e do Conselho, de 31 de março [Internet]. Diário da República. Lisboa; nº 124/2007, série I, 29 jun 2007 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2xz8mHU>
38. Portugal. Lei nº 12, de 26 de março de 2009. Estabelece o regime jurídico da qualidade e segurança relativa à dádiva, coleta, análise, processamento, preservação, armazenamento, distribuição e aplicação de tecidos e células de origem humana [Internet]. Diário da República. Lisboa; nº 60/2009, série I, 26 mar 2009 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2wkPijI>
39. Portugal. Lei nº 36, de 12 de junho de 2013. Aprova o regime de garantia de qualidade e segurança dos órgãos de origem humana destinados a transplantação no corpo humano [Internet]. Diário da República. Lisboa; nº 112/2013, série I, 12 jun 2013 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2k69D3C>
40. Portugal. Conselho Nacional de Ética para as Ciências da Vida. Pareceres [Internet]. 2017 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2yajkUC>
41. Portugal. Despacho nº 14.341, de 6 de novembro de 2013. Determina os requisitos necessários para a colheita de órgãos em doadores falecidos em paragem cardiocirculatória [Internet]. Diário da República. Lisboa; nº 215/2013, série II, 6 nov 2013 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2wW4XDk>
42. Portugal. Despacho nº 26.951, de 26 de novembro de 2007. Criação e constituição da Entidade de Verificação da Admissibilidade da Colheita para Transplante [Internet]. Diário da República. Lisboa; nº 227/2007, série II, 26 nov 2007 [acesso 30 jul 2017]. Disponível: <http://bit.ly/2fTaoZf>
43. Portugal. Portaria nº 802/2010 de 23 de agosto. Cria o Programa Nacional de Doação Renal Cruzada (PNDRC) para inscrição de pares dador-receptor de rim e respectiva alocação cruzada.
44. Instituto Português do Sangue e da Transplantação. Coordenação Nacional da Transplantação. Doação e transplantação de órgãos [Internet]. 6 fev 2017 [acesso 30 jul 2017]. Disponível: <https://goo.gl/pVp5Pm>
45. Portugal. Conselho Nacional de Ética para as Ciências da Vida. Parecer nº 77/CNECV/2014. Parecer sobre bioética e saúde mental. 17 fev 2014.
46. Portugal. Conselho Nacional de Ética para as Ciências da Vida, Centro de Documentação. Questões contemporâneas em bioética [Internet]. 2016 [acesso 28 set 2017]. Disponível: <http://bit.ly/2ylzm5v>
47. Arendt H. Responsabilidade e julgamento. São Paulo: Companhia das Letras; 2004.

