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EDITORIAL

I. STUDIES * STUDII

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(RECOMMENDED CITATION)

Editorial:

INFORMED CONSENT FORM FOR PARTICIPANTS IN MEDICAL RESEARCH: DETAILED OR GENERAL INFORMATION?

MARIA ALUAŞ

The Informed Consent is one of the most debated topics in Medical Ethics in the last five decades. Should or not patients be informed about medical interventions, treatments, and possible risks of medical acts on their bodies? This question was debated and detailed on all sides. The second development on these topics was on what information should be put on the Informed Consent form: should it contain all relevant information for the patient, in order to make an informed decision for his/her state of health or only the main and general information? In the daily medical practice there are many issues with the adequate quantity of information for the patient and if the Informed Consent Form is too long or to complex, the patient does not read all the information. Usually health care professionals are saying that patients are signing Consent Forms, but they do not read them and do not understand them.

Major strengths of a long and complete Informed Consent form are: it should be clear, complete, and meaningful; information is given in a comprehensive way, logically and structured. By complete information we mean the information on: proposed surgery interventions, the possible side effects associated with interventions, medication and consequences of this kind of intervention, risks and benefits of intervention, other options instead of participating in study, duration and constraints associated with, and follow-up program. Also it describes the purpose of the study, reasons to participate, the necessity of the study and procedures to be followed such they

are proposed. It refers also information about statement of confidentiality, research funding and conflict of interest. Every detail they need to know is here, including costs and expenses for participation and possible compensation, or contact information.

Before making any decision, participants must to discuss with an investigator, review the information, and have the opportunity to ask any question they may have. They also will keep a copy of the signed and dated consent form. In our understanding, this is a very important fact, to provide the patient with a copy of the Informed Consent form. After the procedure, the patient can read it again, if he/she need to, any time or he/she can ask details or explanations to doctor if it necessary, in order to avoid bad consequences or complications that can result from the medical act.

As **weaknesses of a complete consent form**, we can notice that it is too long and too detailed, information is repeated and participants won't have the patience to read so many pages and to try to understand all information. If they sign a general form and a detailed form later, as a part of the same medical act it could be a good option. In this way, the information could be understood such as the details about the necessity of the medical act and its consequences.

Ethical justifications for detailed informed consent form. We recognize the right of participants to be informed, to can decide for themselves and to have control over what happens with their health. If they are adequately informed and they keep a certain control of their life, they are autonomous and their lives are considered valuable. Respecting the autonomy means to recognize that they are persons and they will decide freely and without constraints and coercions what to do in the future, to accept to be part in a study or to refuse if it is considered too dangerous for them at this moment.

We must to involve all concerned in decision by informing them about all they need to know in order to take a good decision for them, for their family, according their life projects. If the study is meant to serve a social good, to enhance the health care of other people participants must to know that they will help society and they collaborate with researchers in order to obtain results for other patients in the same health condition. This collaboration presume

engagement and investment, but in the same time it is very important to respect all participants as persons with dignity and rights, because we, as individuals, can have different views about health, freedom, social good and social values life and its purpose.

The participant is an individual and he or she can have its own priorities, its own hierarchy of values in the life and personal values could be more important than social ones. Participants must to have a priority on expressing their own wishes, fears and concerns about what will happen with them, because they are the main subjects of research study; it is about their body, their heath condition and their life; and not inform them means not recognize their voice as a priority and not recognize them as our equals, or as persons.

Another ethical justification is to avoid and to minimize the possibility of exploitation in research, especially from Wertheimer point of view: an unfair distribution of benefits (Emanuel, Wendler and Grady). The question is who benefits are more important, participants or society? We believe participants should have more benefits than society, but this purpose is difficult to be guarantee from the beginning of the study. This is the reason for why the informed consent process is so important in research. If participants decide by themselves that participating is the right choice even if it could be possible not to have many benefits for them, if they want to do a sort of sacrifice for social good, research can initiate or continue, but they must to decide what they want to do with their lives and not others.

The requirements on **voluntary** and **informed** consent are also important, because participants need to know that they have a choice to do, and they can quit the project at any time, to ask questions they may have about the study, and they have the possibility to be assisted by research protection advocate. They must to feel protected and to have control on what will happen in their lives.

This issue of *Studia Universitatis Babeş-Bolyai Bioethica* presents articles related most to research practice and presents different relevant nuances of these realities. We believe this is the right way and process to obtain results and to act correctly and assumed in a researcher work.

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*I. STUDIES * STUDII*

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THE PROFESSIONAL RELATIONSHIP BETWEEN THE DENTAL PHYSICIAN AND THE PATIENT

SORIN HOSTIUC[1*]

ABSTRACT. The physician-patient relationship is the core interpersonal relationship staying at the base of the contemporary medical ethics, most clinical issues causing ethical dilemmas being centered around it. This relationship can be analyzed from four main perspectives: legal, social, psychological and moral.

In medical ethics literature, there are numerous models of physician-patient relationship, which are based, on variable degrees, on the legal, psychologic, sociologic and moral principles that will be briefly summarized here, the most well-known being the models developed by Szasz and Hollander, Roter and Hall, Ben-Sira, Thomasma, Mead and Bower, and especially Emanuel, whose models are currently considered the standard models and are being presented as such to medical student and residents in many countries (including Romania).

However, the dental profession has some particularities that require, at least in some circumstances, some additional models that will be presented briefly in this unsystematised review.

We will begin by performing a brief analysis of the professionalism of the dental-patient relationship, followed by a discussion regarding the most often cited models of relationship, namely those developed by Ozar, Coleman and Burton, Friedman and Bedos.

Keywords: *dental patient relationship, Ozar, professionalism*

REZUMAT. ***Relația profesională dintre medicul dentist și pacient.*** Relația medic-pacient este una dintre interacţiunile profesionale esenţiale ale medicilor, stând la baza eticii medicale contemporane, majoritatea dilemelor de etică clinică fiind centrate de aceasta. Relația medic-pacient poate fi analizată din patru perspective fundamentale: legală, socială, psihologică și morală.

În literatura de specialitate sunt descrise numeroase modele de relație medic-pacient care sunt bazate, în grade variabile, pe principii legale, psihologice, sociologice și morale ce vor fi sumarizate aici, cele mai cunoscute fiind cele dezvoltate de Szasz și Hollander, Roter și Hall, Ben-Sira, Thomasma, Mead și Bower și mai ales

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Emanuel, ale cărui modele sunt considerate de mulți autori drept modelele standard și sunt predate ca atare studenților medicinişti şi rezidenţilor din multe țări (inclusiv România).

Medicina dentară are o serie de particularităţi care fac absolut necesară utilizarea, cel puțin în unele circumstanţe, a unor modele adiţionale, care vor fi prezentate succint în acest review nesistematizat al literaturii de specialitate.

Vom începe această analiză cu o scurtă discuţie despre profesionalism în contextul relaţiei medic dentist-pacient, după care vom analiza cele mai citate modele de relație, respectiv cele dezvoltate de Ozar, Coleman și Burton, Friedman și Bedos.

Cuvinte cheie: *relația medic dentist-pacient, Ozar, profesionalism*

1. Introduction

The physician-patient relationship is the core interpersonal relationship staying at the base of the contemporary medical ethics, most clinical issues causing ethical dilemmas being centered around it. This relationship can be analyzed from four main perspectives: legal, social, psychological and moral.

From a legal point of view, in most countries this relationship is contractual, and it has to fulfill four main conditions to be valid: the existence of a capacity to enter in civil contracts (usually occurring automatically during adulthood), a valid consent of all parties, a determined object a licit cause. Within this legal relationship, the physician has some fundamental obligations, such as the duty to care, the duty to obtain the informed consent, the obligation to inform the patient truthfully, to respect the confidentiality of the medical act, and many other obligation specific to particular contractual relationships (such as respecting reproductive rights, rights determined by the presence of an HIV positive status, etc.).

From a psychologic point of view, the physician-patient relationship is usually analyzed through four main models: obedience, domination, aggressivity, and positivity, with the mention that often in clinical practice there are mixed models, and that these models tend to vary in time, depending on the disease, the particular psychological state of the patient in a particular moment, etc. [1].

The sociological models of the physician-patient relationship are analyzed through the interrelation of the subjects with their social environment. How is this done, depends heavily on the historical and geographical context. Classically, in Europe, the model was one based on the power of the physician (as a representative of the state) and obedience of the patient, which was considered the passive recipient of a certain disorders. Foucault has described the appearance, starting with

the 18th century, of state-related power structures that were effectively centered on the body, the body of the citizen [2]. The purpose of this approach was to survey, organize and arrange the body of citizens in order to increase their productivity (and associated with it reproductivity), a process called the disciplinary technology of labour [2]. In the US, the approach was opposite, medicine being seen as a profession, and the physician [3] – as a professional. Initially, the patient was seen as a passive recipient of the medical procedures and approach that mimics the European way in method (but not in purpose); this approach was however replaced with a more contract-based approach [4], with clear delineations of the right and obligations of each party, and with the patient seen as an active participant to the professional relationship [5,6].

The morality-based models of the physician-patient relationship are based primarily on respecting principles and virtues of the medical profession. To this purpose, there are many theories, with variable degrees of applicability in various medical professions, each based on a fundamental/ a few fundamental principles or virtues. From a historical point of view, there were two main models – one based on beneficence (older historically, directly derived from Hippocratic principles), and one based on autonomy (currently being considered the base of most physician-patient relationships in developed countries) [3,7]. Others, such as the model based on trust, promoted by Edmund Pellegrino [8], even though important and heavily debated, failed to reach the widespread of the two main ones.

In medical ethics literature, there are numerous models of physician-patient relationship, which are based, on variable degrees, on the legal, psychologic, sociologic and moral principles that were briefly summarized above, the most well-known being the models developed by Szasz and Hollander [9], Roter and Hall [10], Ben-Sira [11], Thomasma [12], Mead and Bower [13], and especially Emanuel [14], which are currently considered the standard models and are being presented as such to medical student and residents in many countries (including Romania).

However, the dental profession has some particularities that require, at least in some circumstances, some additional models that will be presented briefly in this unsystematised review.

2. The profession of dentist

Each profession is defined by a series of characteristics appertaining to the following categories: prestige, innate abilities, acquired abilities, knowledge, protected marked, control, common identity and values, ethical norms, interrelations

with the members of other communities. These characteristics taken together transform the practitioners in a community that is different enough from other communities, unlike crafts, which are not clearly differentiated one from another. An advocate is a professional, as it has unique characteristics that separate them from the practitioners of any other type of occupation. A carpenter is a craftsman – he produces something unique, but his occupation is not clearly separated from others such as glazier, watchmaker, skinner, etc. – these occupation do not have unique codes of ethics, protected marked, common identity and values, etc. (even though they have some unique characteristics, they are not enough to clearly differentiate them). According to Goode, there are seven characteristics that have to be fulfilled in order for an occupation to be considered a profession, namely: (1) a common identity of all members of the profession, (2) common values, (3) the ability to retain its members, (4) a strictly defined relationship with the non-professionals appertaining to that group, (5) unique lexical constructs, which are difficult to be fully comprehended by non-specialists, (6) mechanisms of control to which all members are subjected to and (7) mechanisms to limit the entrance in the profession[15].

Dentistry is one of the few true professions (together with physicians or lawyers), and its members for a unique guild, having unique characteristics that clearly separates them from physicians, significantly more compared to the differences between various medical specialties; therefore, dentistry is a distinct profession, while plastic surgery is not. Ozar defines eight main categories of professional obligations that clearly differentiates dentistry from the medical profession, those being: (1) obligations toward the client (patient or group of patients), (2) an ideal relation between dentist and patient, (3) central values, (4) competency, (5) a relative prioritization of the beneficence of the patient, (6) an ideal relation with other dental practitioners, (7) a relationship between the dental practitioner and the community and (8) integrity and education [16,17].

One of the unique characteristics of the dental-patient relationship is its strong ties with commercial relationships between client and provider, as dentistry is (mostly) a private enterprise. The Dental Ethics Manual of the FDI states that "As noted above, dentistry is a recognised profession. At the same time, however, it is a commercial enterprise, whereby dentists employ their skills to earn a living. There is a potential tension between these two aspects of dentistry and maintaining an appropriate balance between them is often difficult. Some dentists may be tempted to minimise their commitment to professionalism in order to increase their income, for example by aggressive advertising and/or specialising in lucrative cosmetic procedures. If taken too far, such activities can diminish the public's respect for and trust in the entire dental profession with the result that dentists will be regarded as just another

set of entrepreneurs who place their own interests above those of the people they serve. Such behaviour is in conflict with the requirement of the FDI International Principles of Ethics for the Dental Profession that 'the dentist should act in a manner which will enhance the prestige and reputation of the profession'." [18]

Another characteristic of this profession is a strong emphasis on the technical part of the practice, similar maybe with orthopaedics from general medicine. Due to these unique characteristics, there have been developed a series of particular models of the dental-patient relationship.

3. Models of dental-patient relationship

The most well-known are the four models described by Ozar, the author of maybe the most influential book on dental ethics at an international level, namely the guild model, the agent model, commercial model and the interactive model [17,19]. In the guild model, the dentist is in total control, a status based on his awareness and fully comprehension of the dental needs of his patient. The patient is a passive recipient, which accepts all the decisions taken by the dentist, as he has neither the theoretical nor the practical knowledge to solve his dental issues. This model is highly similar to the paternalistic model of the physician-patient relationship from general medicine [14] with one notable, but fundamental exception. If, in the paternalistic model, the physician is seen as a reservoir of theoretical, practical and applied knowledge, in the guild model, the dentist is not an independent expert but rather a representative of his profession; knowledge is acquired within his profession, which certifies him, has internal control mechanisms, and establishes how should he manage the patient regarding all aspects of this interaction. The agent model is opposite to the guild model, all control being transferred to the patient, who decides the optimal course of treatment, the physician being only skilled worker. This approach is a more extreme variant of the autonomy model of the physician-patient relationship [14], in which the autonomy of the physician is deposed, him being unable to refuse a treatment with which he does not agree with, and his professional independence is questionable. The commercial model is seen as a middle ground between the guild and the agent model, in which both parties have specific rights and obligations, the autonomy of both parties is respected. The dentist is only a provider of medical services, the patient selecting the best variant, depending on (mostly) his financial potency. This approach does not take into account the professional duties of the dentist and is not allowed, as a pure form, in many countries, including Romania. For example, upon this model, the dentist cannot be obliged to treat dental emergencies, as there

is not a contractual relationship established within fully agreed terms between the contractual parties. The last model is the interactive one, which was developed later by Ozar (his first theory containing only the first three models). In this mode, the dentist and patient are in a state of equilibrium – each has a set of values that the other has to respect, each is involved in the decision-making process and the autonomy of both members of the therapeutic alliance is respected [17].

Coleman and Burton have developed four models of dentist-patient relationship, depending on who initiates the dental consultation, namely: (1) consultations initiated by the patient (in which the patient is in informational control, the dentist not knowing anything about him), (2) consultations initiated by third parties (other colleagues, physicians), in which the patient knows almost everything about his disease, and the physician knows little about him (what his colleague told him), (3) periodic consultations, initiated by the dentist, in which both parties have partial knowledge about the dental status of the patient, and (4) consultations for the continuation of the treatment, initiated by the physician, in which the dentist is in informational control [20].

Friedman et al have developed a iatrosedative model, which is useful in anxious/depressive patients who need extensive dental procedures (the model has been developed on patients needing total restorative therapies) [21]. According to this model, dental patients have four types of responses to extremely anxiogenic situations: correct adaptation, type 1 maladaptation (patients who see dental loss as a severe decrease in quality of life, causing difficulties in the psychologic adaptation to the new dental status), type 2 maladaptation (which adds physical inability to cope with the new dental status), and type 3 maladaptation (patients not wanting to wear dental prostheses, never come again to the dentist, generating chronic depression secondary to their edentulous status [21].

Bedos has developed a model for dentists working specifically with vulnerable patients from a socio-economic point of view [22]; his approach is mostly deliberative, the professional interaction having five main axes: (1) awareness regarding the social context of the patients, (2) allowing more time and increasing the empathy, (3) avoidance of moralistic attitudes, (4) removal of social distances and (5) favouring a direct contact with the patients.

These models allow a proper management of the vast majority of dental patients, both adult and children, irrespective of their social status or economic power. However, physicians should be able to properly identify which model best suits a particular patient, and use it accordingly, and to shift it depending on particular circumstances or new events. This is one of the most difficult part in the social interaction with the patient, but is essential to build trust in the professional relationship, to increase therapeutic compliance and, in the end, to maximize the medical benefit for the patient.

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ETHICAL ASPECTS IN THE MANAGEMENT OF HELICOBACTER PYLORI INFECTION IN CHILDREN

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ABSTRACT. Ethical considerations are critical in medical practice, especially when doctors face the necessity of treating underage patients. Managing Helicobacter pylori infection, the most frequent chronic infection in the world, implies a multidisciplinary approach, and each of the members of the medical team has to act according to the legal provisions and ethical values. Children should be encouraged to involve in medical decisions, under the protection of an adult consent, but particular aspect related to the patient's development have to be carefully considered when discussing minor patient assent.

Keywords*: parental consent, child assent, ethics, Helicobacter pylori*

REZUMAT. ***Aspecte etice privind gestionarea infecţiilor cu Helicobacter pylori la copii.*** Consideraţiile etice sunt esenţiale în practica medicală, mai ales atunci când medicii se confruntă cu necesitatea de a trata pacienţii care nu au vârsta legală pentru a consimţi. Gestionarea infecţiei cu Helicobacter pylori, cea mai frecventă infecţie cronică din lume, implică o abordare multidisciplinară şi fiecare dintre membrii echipei medicale trebuie să acţioneze în conformitate cu prevederile legale şi cu valorile etice. Copiii trebuie încurajaţi să se implice în decizii medicale, sub protecţia consimţământului adulţilor, dar aspectele specifice referitoare la dezvoltarea pacientului trebuie să fie luate serios în considerare atunci când se discută despre acordul pacientului minor.

Cuvinte-cheie: *consimţământul părinţilor, acordul copilului, etică, Helicobacter pylori*

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Introduction

Helicobacter pylori infection is the most common chronic infection in the world, both in adults and children [1]. The infection occurs mainly in childhood, the incidence and prevalence increasing progressively with age and, in the absence of adequate treatment, bacterial colonization persists throughout life [2, 3]. It is estimated that 70% of the population of developing countries and 30-40% of the population of industrialized countries is affected [4]; in developing countries 50% of children are infected by the age of 5 [5].

In 1994, the International Agency for Research of Cancer, classified Helicobacter pylori (Hp) as a class I carcinogen, the infection being considered the most important risk factor in the mechanism of gastric carcinogenesis [6]. Hp plays an important role in the development of adenocarcinomas as well as MALT lymphomas [7], the risk being 3 to 6 times higher than in the uninfected population [8].

A universally accepted cascade of precancerous lesions has been determined: active nonatrophic chronic gastritis-> multifocal atrophy-> intestinal metaplasia-> dysplasia-> invasive carcinoma [9], with a dynamic progression and an individual-dependent speed of progression [10].

Given that in developing countries such as Romania the population is infected in infancy, premalignant lesions could start early, leading to an increased prevalence and onset of gastric cancer at young ages [11, 12]. Therefore, adequate public health programs are needed to prevent infection as well as establishing diagnostic methods and individual treatment according to age. The current pediatric guidelines for the management of Hp infection support upper gastrointestinal endoscopy with biopsies as the best method of diagnosis [13]. The Updated Sydney Classification for gastritis [14] is recommended for the assessment of the histopathological changes of the gastric mucosa [13].

This invasive method raises important ethical issues for the physician. The medical intervention involving pediatric patients must adhere to ethical and legal principles, such as: respect for the patients' rights to self-determination and confidentiality, and ensure good prior information in order to obtain the informed consent and is obliged to take into consideration the anatomical, physiological and psychological features that distinguish the child from an adult patient [15].

Discussions

1. General ethical considerations in the diagnosis and treatment of children

In medical decision making, patients and physicians should work together in an egalitarian partnership [16]. In this process, the patient needs to possess appropriate decisional capacity, and this is a relative matter [17, 18]. Informed

consent involves the provision of relevant information by the doctor so that the patient can exercise the right to make the decision in full knowledge, while respecting the patient's autonomy and the medical-legal needs of the institutions [19].

Informed consent is, however, more than a signed form. It is a process in which the parent of a child is given sufficient information, in order to be able to make a truly informed decision about the elected medical strategies [20]. Effort is required to provide accessible documents, in plain language, at an understanding level of 6 to 12 years [21]. There is evidence that participant comprehension decreases with increasing document length. There must be a balance between providing participants with overwhelming information and giving insufficient information to make an informed choice. [22] Doctors are required to protect children against serious harm, pain and death and parents are obliged to make decisions based on the best interest of their children. If the doctors consider that the parents are making a wrong decision, in order to reach an agreement, they must provide additional explanations and specify the consequences of the inappropriate decision [23].

2. Informed consent versus understood consent

In order to obtain a truly meaningful consent, the physician must spend enough time with the parent of a minor to explain in simple language the stages of treatment, the risks, the benefits and the alternatives for the treatment and to use repetitive techniques to test the understanding. The target should be to secure an "understood consent" [20]. One suggested method is to use a stratified approach, with additional details when needed. There are two complementary processes in obtaining informed consent: the presentation of the written material and the process of explaining it [24]. Even if the combined method, written and verbal, is time consuming, it offers the possibility of identifying parents who, despite repeated corrective feedback, do not understand sufficiently [25]. At the same time, it is necessary to adapt to local cultural norms and levels of education [26].

3. Parental consent versus child assent

Another important ethical aspect that doctors have to consider is the child's assent, not only when treating, but also when conducting pediatric research. It must be correlated with the informed consent of the parent or legal guardian. In this case, the intention is to identify those elements that are important for an adequate voluntary opinion/ of the child [27].

According to the international recommendations, the person who gives his agreement must be aware of the procedures that will be performed, freely choose to submit to the procedures, communicate his clear choice and understand the possibility of withdrawal, when considering medical research [28].

As specified by ethical guidelines, there are three stages of childhood: early, middle childhood and adolescence each associated with a different ability to make logical decisions [29]. Cognitive, emotional and social development should be taken into consideration in the process in order to ensure that the medical decisions are informed, rational and voluntary [16, 30]. An agreement should be reached regarding the age when patients possess the appropriate maturity to take the right medical decision [31].

Ethical considerations in the clinical research involving children

Research involving humans can be done in a therapeutic or purely experimental sense. Research involving children is ethically permissible only if it is carried out for therapeutic purposes, to the benefit of the patients and is subject to informed consent [32].

The unique vulnerability of children as research subjects has been identified since 1970, along with the publication of the article entitled "Ethics and Clinical Research", by Henry Beecher. Based on the ethical principle of respect for persons, the parental permission and the child's opinion work together for the protection of the child [33].

The ethical principle of "scientific necessity" states that research should not be conducted on children unless it is necessary to reach a scientific and / or public health objective that can be beneficial for the health and well-being of children [34].

When the minor is able to understand correctly and fully, he must give his own consent, along with that of the legal representative. Non-therapeutic experiments are morally inadmissible on children. Exceptions are those situations in which the use of an experimental drug represents the last chance to save the life of the child, but these situations are rare and must be rigorously evaluated [33].

Romanian legislation

In Romania, until the 2000s, there was no legislation that specifically referred to the protection of the child in scientific research. Article 19 of the Romanian Law on Patient Rights states that "Persons who are not able to express their will cannot be used for scientific research, except with the consent of the legal representative and if the research is done in the patient's interest". Legal representatives are usually the parents, or one of the parents. But, by adopting the New Civil Code in 2009, Romania has new provisions regard to

minors, to the joint guardianship: both parents must decide on their minor child, whether they are married or not, if they are separated, if divorced or living together with the child [35].

In addition, in 2004 the Law on good conduct in scientific research, technological development and innovation has been elaborated, subsequently modified and supplemented by Law 398/2006. In 2006 Romania implemented the Guide on the clinical investigation of medicines in the pediatric population [36].

In Romania, any clinical study on humans is authorized and supervised by the National Medicine Agency, which has been authorized to develop the "Rules of good practice in the clinical study". A clinical study can start only after obtaining the approval of the National Ethics Commission and / or the local Ethics Committee of the institution where the research is carried out. For the phase I studies it is necessary to obtain the approval of both ethical committees. For the phase II and III studies, the opinion of the local committee and the National Ethics Commission is also required. For phase IV studies, the approval of the local Ethics Committee is sufficient. Regarding the research involving children, according to the European legislation, also adopted by Romania, phase I studies are not allowed in the pediatric population [36].

Particular ethical aspects in the pediatric endoscopy

Endoscopy gains importance in the diagnosis and treatment of pediatric patients and specific rules are needed in the design and management of these units, as this experience affects both the patient and the family. In order to ensure safe and effective pediatric endoscopies, the unit should pay attention to the unique needs of children and should also focus on the goal to reduce anxiety. [37, 38].

Prior to the investigation physicians have to consider the risks and the benefits of the procedure, the agreement with the ethical values, the influence on other methods that may be needed for treatment and the long-term consequences of the procedure [39].

A great variation in types of sedation and analgesia are administered in pediatric endoscopy [40]. As a consequence, endoscopy rooms must provide age-appropriate analgesia and suitable equipment that for appropriate rescue maneuvers. [37]

Also, the patient and the family should be informed about the risks of the maneuver and the associated risks of sedation and informed consent, as well as assent should be obtained when appropriate [41].

As opposed to adults, tissue sampling during esofagogastroduodenoscopy is a routine procedure, biopsies being collected at least from the esophagus, stomach and duodenum; even in the absence of macroscopical findings, they are considered necessary [42, 43, 44]. Moreover, the risks of a subsequent endoscopy associated with sedation are higher than the risk of obtaining biopsies [45].

When considering the diagnostic strategies for the detection of the Helicobacter pylori infection in children, current pediatric guidelines recommend endoscopy whit biopsy as the election method, even though it is an invasive procedure. Other noninvasive methods are also available, with a lower sensitivity and specificity, but patients and their guardians are entitled to be aware of them when considering the diagnostic technique [13].

Particular ethical aspects in the pediatric pathological diagnosis

The most frequent ethical that pathologists are facing are related to confidentiality, privacy and the use of tissue samples in research [46]. Therefore, there is a great need for education in ethics for pathologists [47].

The application of the four basic principles of medical ethics, meaning autonomy, beneficence, nonmaleficence and justice, is mandatory for the pathologists, especially when they are dealing with pediatric patients, even though their interpretation is not as clear as for other medical specialties [48].

Prior to analyzing a sample, the pathologist should ensure that a consent was obtained from the patient or guardians, even though it is assumed that the consent has been obtained by the clinician [49].

The tissue samples that are submitted for pathological evaluation remain the property of the patient, even though the pathologist has the legal rights to process them. The preservation of the tissue for further research has to be done with the explicit permission of the patient [49]. National laws stipulating the storage conditions for biological materials, meaning tissue blocks and slides, must be strictly followed. When managing pediatric patients, pathologists should carefully consider that during the storage period patients may become adults and along with the development of medicine, the patients may require the tissue samples for newly discovered ancillary studies.

There are special situations in which the pathologist cannot provide a 100% accurate diagnosis or in which the laboratory does not have complementary examinations that would help establish a clear-cut diagnosis. In these instances, a second opinion from colleague could be needed, but the change of opinions has to remain confidential [50].

Along with the development of social media, there are numerous platforms used for medical learning. When pathologists post histopathology images of the cases, they should respect their professional standards and pay special attention in respecting the confidentiality of the patient [51, 52].

Conclusion

The pediatric population represents a vulnerable group, which is why special measures are needed in the diagnostic strategies and medical treatment of children, in order to protect their rights and to avoid exposure to unnecessary risks. The management of HP infection in children involves a multidisciplinary team, where each of the specialist doctors, namely pediatrician, gastroenterologist, anesthesiologist, pathologist, must adhere to the medical ethical principles.

Regarding pediatric research there must be a benefit / risk balance and it is recommended for the study to be conducted by experienced researchers, based on informed consent and to be approved by an ethics committee with experience in children's rights and needs.

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CURRENT STATE OF LITERATURE RELATED TO THE EUTHANASIA PRACTICES OF MINORS

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ABSTRACT. Euthanasia of minors is a medical procedure regulated and implemented in Belgium and Nederland. As all Euthanasia practices it is a topic very debated, especially in the field of medical ethics. This paper aim is to identify the literature published on this topic and to delineate the main perspectives of these practices. We collected articles published between 1st of January 2014 and 1st July 2018, treating about practices of euthanasia as a protocol for minors. 73 articles were selected from a total of 292 publications. We were looking to identify, in the same time, the context of the ethical debate on the topic and possible solutions or alternative to these practices.

***Key Words**: Ethics, Minors' Euthanasia, End-of-life Decisions Making*

REZUMAT. ***Stadiul actual al publicaţiilor relative la practicile eutanasiei la minori.*** Eutanasia pentru minori este o procedură medicală reglementată şi pusă în aplicare în Belgia şi în Olanda. Ca toate practicile eutanasiei este un subiect foarte dezbătut, în special în domeniul eticii medicale. Scopul acestui articol este de a identifica literatura publicată pe acest subiect şi de a delimita principalele perspective ale acestor practici. Am colectat articole publicate între 1 ianuarie 2014 şi 1 iulie 2018, care tratează practicile eutanasiei ca protocol pentru minori. Au fost selectate 73 de articole dintr-un total de 292 de publicaţii. Am căutat să identificăm, în acelaşi timp, contextul dezbaterii etice pe această temă şi soluţii posibile sau alternative la aceste practici.

***Cuvinte cheie**: etică, eutanasia la minori, deciziile finalului de viaţă*

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Introduction

Child death is a very sensitive topic and the debate around the world on children end-of-life issues is quite taboo. People do not talk about death, generally speaking, and children's death is somehow against nature, that's why it is very hard to find a good answer to this question. The problem is a society issue and not only a medical practice problem.

Some countries adopted legal regulations on Euthanasia for minors: Netherland in 2002 and Belgium in 2014. We have investigated the ethical reflection behind these practices and the decision to introduce euthanasia as a new protocol for minor's end-of-life care.

As the Hippocrates Oath is one of the important parts in the formation of a medical doctor ("I will use treatment to help the sick according to my ability and judgment, but never with a view to injury and wrong-doing. Neither will I administer a poison to anybody when asked to do so, nor will I suggest such a course"), the essential questions are the following: Can Euthanasia be considered part of a medical protocol? And do physicians review their own role, professions, and status?

Methods

The bibliographic search was done in two steps by: 1) using combinations of keywords and "MeSh terms" in the PubMed database and 2) selection on inclusion criteria.

The keywords and MeSh terms used are:

"Ethics / moral", "euthanasia / assisted suicide", "end of life", "legislation / law / rights", "pediatric / pediatrics / children / child", in All Fields.

The languages used to explore the bibliography were: English, French, Romanian.

Table 1. Code MeSh

Ethics + euthanasia + pediatrics + legislation + end of life	(("morals"[MeSH Terms] OR "morals"[All Fields] OR "moral"[All Fields] OR "ethic"[All Fields] OR "ethics"[MeSH Terms]) AND ("suicide, assisted" [MeSH Terms] OR ("suicide"[All Fields] AND "assisted"[All Fields]) OR "assisted suicide"[All Fields] OR ("assisted"[All Fields] AND "suicide" [All Fields]) OR "euthanasia"[MeSH Terms] OR "euthanasia"[All Fields]) AND ("child"[MeSH Terms] OR "child"[All Fields] OR "children"[All Fields] OR "pediatrics"[MeSH Terms] OR "pediatrics"[All Fields] OR "pediatric"[All Fields]) AND ("legislation"[Publication Type] OR "legislation as topic" [MeSH Terms] OR "legislation"[All Fields] OR "law"[All Fields] OR "right" [All Fields]) AND end[All Fields] AND ("life"[MeSH Terms] OR "life" [All Fields])) AND ("2014/01/01"[PDAT] : "2018/07/01"[PDAT])

Ethics + euthanasia + pediatrics + legislation	(("morals"[MeSH Terms] OR "morals"[All Fields] OR "moral"[All Fields] OR "ethic"[All Fields] OR "ethics"[MeSH Terms]) AND ("suicide, assisted" [MeSH Terms] OR ("suicide"[All Fields] AND "assisted"[All Fields]) OR "assisted suicide"[All Fields] OR ("assisted"[All Fields] AND "suicide" [All Fields]) OR "euthanasia"[MeSH Terms] OR "euthanasia"[All Fields]) AND ("child"[MeSH Terms] OR "child"[All Fields] OR "children"[All Fields] OR "pediatrics"[MeSH Terms] OR "pediatrics"[All Fields] OR "pediatric" [All Fields]) AND ("legislation"[Publication Type] OR "legislation as topic"[MeSH Terms] OR "legislation"[All Fields] OR "law"[All Fields] OR "right"[All Fields])) AND ("2014/01/01"[PDAT] : "2018/07/01"[PDAT])
Ethics + euthanasia + pediatrics	(("morals"[MeSH Terms] OR "morals"[All Fields] OR "moral"[All Fields] OR "ethic"[All Fields] OR "ethics"[MeSH Terms]) AND ("suicide, assisted" [MeSH Terms] OR ("suicide"[All Fields] AND "assisted"[All Fields]) OR "assisted suicide"[All Fields] OR ("assisted"[All Fields] AND "suicide" [All Fields]) OR "euthanasia"[MeSH Terms] OR "euthanasia"[All Fields]) AND ("child"[MeSH Terms] OR "child"[All Fields] OR "children"[All Fields] OR "pediatrics"[MeSH Terms] OR "pediatrics"[All Fields] OR "pediatric" [All Fields])) AND ("2014/01/01"[PDAT] : "2018/07/01"[PDAT])
Ethics+ end of life + pediatrics	(("morals"[MeSH Terms] OR "morals"[All Fields] OR "moral"[All Fields] OR "ethic"[All Fields] OR "ethics"[MeSH Terms]) AND ("end of life"[All Fields] OR "end-of-life"[All Fields]) AND ("child"[MeSH Terms] OR "child"[All Fields] OR "children"[All Fields] OR "pediatrics"[MeSH Terms] OR "pediatrics" [All Fields] OR "pediatric"[All Fields])) AND ("2014/01/01"[PDAT] : "2018/07/01"[PDAT])

Table 1. list the codes used for each search and combination in the PubMed database.

To stay close to the subject the keywords and MeSh terms "ethic / moral" and "pediatric / pediatrics / children / child" were used in each combination to establish a selection criterion appropriate to our purpose.

The combinations are listed in ***Table 2***.

The exploratory search followed two steps:

a) The criteria for the selection in the PubMed:

- The date of publication: 1/1/2014 to 1/7/2018
- The search box: All Fields

From a total of 1957 papers found, 292 have been published in between 1st January 2014 and 1st July 2018. After analyzing the title and the abstract, 73 articles, 25% were relevant to our subject.

Papers published after 1st July 2018 were not been included in our study.

b) The exploration of the documents was done by identifying:

- The titles, their relevance to the care of children in the end of life and ethical reflections raised by the topic
- The authors and the geographical origin of the publication

Inclusion criteria are:

- The date of publication: 1st January 2014 to 1st July 2018
- Relevance for the subject.

The bibliographic research focused on the ethical reflections related to the Euthanasia for minors and perspectives in the end-of-life care of minors.

Results

Table 2. Number of different pre or post-selection results

Key-word combination	**Total results N**	**Total result between 2014-2018 N**	**Selections**	
			N	%*
Ethic + euthanasia + pediatric + legislation + end of life	39	11	9	82%
Ethic + euthanasia + pediatric + legislation	492	37	11	30%
Ethic + euthanasia + pediatric	1052	78	11	14%
Ethic + end of life + pediatric	374	166	42	25,3%
	1957	292	73	25%
**the result in % define the total of results concerned between 2014 and 2015*				

From 73 publications selected (***Table 3***) 27 of them, 37% (2; 5; 8; 11; 14; 15; 17-22; 27; 31; 47; 49; 51; 52; 54; 55; 61; 63; 65-68; 70) are related to euthanasia of minors, 46 articles, 63% (1; 4;10; 16; 23-26; 28; 34; 35-46; 50; 53; 56-60; 62; 64; 69; 71-73) present topics related to the end of life of minors. 11 articles, 15% (3; 7; 9; 12; 13; 29-33; 48) treat the legislation on the Euthanasia of minors or legislation related to the end of life of minors.

Table 3. Concordance of keywords and MeSh terms with the selected articles

Ethic/moral	73	100%
Euthanasia/assisted suicide	27	37%
Pediatric/pediatrics/children/child	73	100%
Legislation/law/right	11	15%
End of life	46	63%

The keywords "ethics / moral", "pediatric / pediatrics / children / child" were used in each combination, all 73 papers, 100% articles are about minors' ethical issues and end-of-life.

Table 4 present a stratification by publication date for the 73 selected articles, 57 (78%) (2-9; 11-20; 25-31; 34; 36-52; 60-73) were published before 2017, 16 (22%) (1; 10; 21-24; 32; 33; 35; 53-5) were published after this date from 1st January 2017 to 1st July 2018.

Most of the articles were published in 2014, 25 articles (34%) of the total number.

Table 4. Papers/Year

Year	Number of papers	%
2014	25	34%
2015	16	22%
2016	16	22%
2017	9	12%
2018	7	10%
Total	73	100%

Table 5 illustrate the stratification by origin and affiliations of authors. 21 items (29%) (2; 6; 8; 11; 15; 18; 25; 27; 29; 32; 34; 37; 42; 46; 50; 54; 58; 62; 64; 68; 71) of papers are published by authors from United States, 9 (12%) (14; 24; 35; 36; 41; 51; 52; 55; 63;) from Canada and 8 articles (11%) (4; 7; 10; 12; 22; 30; 39; 45) from Netherlands. Authors from France (3, 9, 31, 48,) and the United Kingdom (1; 21; 26; 44) have published 4 papers, (5,5% articles each) and Belgium 3 articles (4%) (16;19;65). 18 articles have been published by authors from different countries.

Table 5. Number and % of selected articles by publication origin

UNITED STATES	21	29%
CANADA	9	12%
NETHERLAND	8	11%
FRANCE	4	5,5%
UNITED KINGDOM	4	5,5%
GERMANY	3	4%
BELGIUM	3	4%
SPAIN	1	1,5%
SWEDEN	1	1,5%
NORWAY	1	1,5%
OTHERS	18	24,5%
Total	73	100%

Table 6 indicate the compatibility proportion of keywords and MeSh terms by country of authors. We note that 75% of selected articles from the Netherlands (6) and 100% from Belgium (3) contain MeSh keywords or words "euthanasia / assisted suicide". For France and the United Kingdom, the results are also high, 50% (2) and 75% (3) respectively.

Selected articles from the United States and Canada containing the keywords and MeSh terms “End of life” have the highest rate 69% (16) for the US and 67% (6) for Canada.

For keywords and MeSh terms "legislation / law / right", the results are 14.3% (3) for the articles published from the United States, 11% (1) for Canada, 25% (2) for articles from the Netherlands, 25% (1) from France, 0% (0) correlation found for the United Kingdom and 33% (1) for Belgium.

Table 6. The compatibility ratio of keywords and MeSh terms by country of publication

	Euthanasia/ assisted suicide		End of life		legislation/law/ right	
	n	%	n	%	N	%
USA	5	31	16	69	3	14.3
CANADA	3	33	6	67	1	11
NETHERLAND	6	75	2	25	2	25
FRANCE	2	50	2	50	1	25
UNITED KINGDOM	3	75	1	25	0	0
BELGIUM	3	100	0	0	1	33

Discussion

The first observation is that the number of publications has decreased over the years, 2014 being the year when 25 articles were published, in 2017 and 2018 there have been published only 9 and 7 papers. The explanation could be that in 2014 Belgium has extended the law on Euthanasia to children, the legislation was implemented, and authors studied and analyzed with pro and cons this initiative and the possibility to be adopted in other countries (Great Britain, France). This is the reason which justifies the enthusiasm on this topic with philosophical and ethical reflection on the subject.

But also, we can suspect many ideas and approaches have been advanced so far and practitioners need time to reflect how to figure out new perspective and clarity on the subject, and the reason that explains the decline in the number of publications over the last two years.

The most of part of authors who treated this topic have affiliations in the United States, maybe because the debate on Euthanasia practices is known and very hot in the North American context.

If we focus on European authors, we noticed that authors are not necessarily from countries where Euthanasia for minors have been regulated. The Netherlands certainly have an acceptable presumed quota who put this country in the first rank in Europe and the third in the world, but authors from Belgium, the pioneers in regulation Euthanasia for minors have not been very interested on this subject, maybe even because they should try to understand better the real consequences of this legal act. Certainly, Netherland have few decades of time to reflect about this subject instead of Belgium. Netherland actually has experimented many issues with assisted suicide and Euthanasia: people are simply administered lethal substances without any given explicit consent, and other issues and errors were observed (van der Heide A, Onwuteaka–Philipsen BD, Rurup ML, et al. End-of-life practices in the Netherlands under the *Euthanasia Act*. N Engl J Med. 2007; 356:1957–65. doi: 10.1056/NEJMsa071143.)

One of the important things is to protect the children and to guarantee their autonomy, to protect health professionals who may suffer moral discomfort, but above all to protect society from certain drifts that are contrary to the life.

The most of part of articles are related to the reflection on Euthanasia and the end of life, maybe because for the society, generally speaking, this is a hot topic and it is necessary to mature the subject by relying it on the current societal experiences and reactions.

The decrease in publications over the past two years may be a sign of the society's and practitioners questioning on developments that have been made, in particular, in terms of legislation, the lack of adequate protocols, and the lack of acceptable solutions and alternatives.

There is selection bias in our study, because even if the keywords used allow an exhaustive search on the subject, they do not allow to search all existing articles in the field. Also, we can notice the existence of a classification bias, because even if we made a search in [All fields] as well as in the MeSh terms, the search was not carried out in the whole article.

Conclusion

The results of our study tend to make us understand that after a very advanced step a status quo is installed due to a lack of response from our society as well as the establishment of legislative tools for the practice on field.

The lack of publication in the last two years compared to those before has dropped, maybe because both medical doctors and public opinion accepted the new framework behind the law.

The lack of ethical training of practitioners and the economic issues related to the health support are also valid causes that raised these new realities.

It would therefore be wise to promote ethics, within the medical profession but also in society in order to give people deep understanding and perspectives on the contemporary issues related to the life and death.

We think that a systematic review with a larger sample and a deeper methodology on the research texts should be done, in order to identify the main reflections and approaches of the topic.

In the end, to the question if the decision to include euthanasia in treatment protocols medically is relevant, the answer is that it still does not solve the problem of suffering, it just allows people to avoid real and deep confrontation and to ignore it.

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CONSEQUENCES OF UNIVERSITY STUDENT'S INADEQUATE NUTRITION ON PHYSICAL AND PSYCHOLOGICAL WELL-BEING DURING ADULTHOOD: A PUBLIC HEALTH CONCERN

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ABSTRACT. A balanced diet is important for development and maintenance of physical and mental health throughout the life, especially during this period of study. Eating behavior undergoes changes in this transition from adolescence to young adulthood, changes that can have a significant impact on the development of diseases or eating disorders later in life. This paper aims to analyze the main social and psychological factors that influence students' eating habits (such as: food taste, time, stress, physical activity, budget, accessibility to healthy foods, nutritional attitudes, social influences, female gender, coffee, alcohol and tobacco consumption, acculturative stress and religion), what nutritional risks these development stages entail, as well as the contribution of public health in the prevention and treatment of eating disorders. In conclusion, the transition to another environment is likely to change the eating behaviors that will be maintained in adulthood. Thus, we need prevent programs to fight against unhealthy eating habits among students, in order to head off an increasing prevalence of overweight and obesity later in life.

Keywords*: student, eating behavior, adulthood, nutrition, transition, public health, eating disorders.*

REZUMAT. ***Impactul nutriției deficitare în studenție asupra sănătății adultului – o problemă de sănătate publică.*** O alimentație echilibrată este importantă pentru dezvoltarea și menținerea unei sănătăți fizice și psihice pe tot parcursul vieții, cât mai ales în perioada studenției. Comportamentul alimentar suferă modificări în tranziția aceasta de la perioada de adolescență la vârsta adultă tânără, modificări ce pot avea un impact semnificativ asupra dezvoltării unor boli sau tulburări alimentare mai târziu în viață. Lucrarea de față își propune să analizeze principalii factori sociali și psihologici ce influențează obiceiurile alimentare în rândul studenților (precum: gustul alimentelor, timpul, stresul,

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activitatea fizică, bugetul, accesibilitatea alimentelor sănătoase, atitudini nutriționale, influențele sociale, genul feminin, consumul de cafea, alcool, tutun, stresul aculturativ și religia), ce riscuri nutriționale presupun aceste etape de dezvoltare, precum și contribuția sănătății publice în prevenirea și tratamentul tulburărilor alimentare. În concluzie, tranziția într-un alt mediu de viață este de natură să modifice comportamentele alimentare ce se vor menține și la vârsta adultă. Astfel, sunt necesare programe de prevenție a luptei contra obiceiurilor alimentare nesănătoase în rândul studenților, cu scopul de a preîntâmpina o prevalență tot mai mare a excesului de greutate și a obezității mai târziu în viață.

Cuvinte cheie: *student, comportament alimentar, vârsta adultă, nutriție, tranziție, sănătate publică, tulburări alimentare.*

Introduction

Students are often perceived as having a privileged position in society and are immune to health and disability issues. Contrary to these beliefs, more and more evidence shows that a fairly large proportion of young people are experiencing poor physical health and that the prevalence of psychological disorders is higher in students than in the general population (Hussain et al., 2013). Moreover, globally, there is an increased prevalence of overweight and obesity, both in developed and developing countries. As they became more rapidly urbanized, the obesity rate has tripled in developing countries over the past 20 years, by increasing the consumption of high calorie foods and adopting a sedentary lifestyle (Peltzer et al., 2014).

University is a critical period in terms of weight gain. During transition from high school to university, students need to adapt to a new environment. When they fail to adapt properly, this can have negative consequences for their health and subsequent weight status. Eating behavior (in addition to physical activity and sedentary lifestyle) is an important factor that influences students' weight (Butler et al., 2004) some studies mentioning that students in the first year of college have a significant increase in weight (Peltzer et al., 2014).

A healthy diet consists of a balance established between the consumption of food and the energy expenditure of the individual, in which the respective foods can provide all the nutrients necessary for a good functioning of the body. The result of a nutritional balance is the optimal state of health, as well as maintaining a normal weight and constant body composition. The dietary balance can only be achieved when the diet provides everything the body needs in terms of carbohydrates, lipids, proteins, minerals, vitamins and water. As a result, food choices need to consider both the use of a particular food and the form of preparation in which it is consumed because there are various forms of

preservation and/or food combinations, but not all of these forms are as healthy for food consumption. In general, it is preferable to use those forms of foods that are rich in nutrients and have fewer calories (Mihai et al., 2018).

Eating behavior, as part of a healthy diet, involves dynamic processes that are based on the complex interaction between different homeostatic mechanisms, neuronal and sensory reward systems and socio-emotional capacity. Human eating behavior develops rapidly from childhood to school age. The way in which a child is raised, the social influences and the food environment influence the development of eating behaviors. Normal development of the individual should lead to adequate weight gain during childhood and healthy eating behavior followed throughout life (Worsley, 2002).

The development of eating behavior: from adolescence to young adulthood

It has been shown that eating habits from childhood are maintained even in adulthood and can have an extraordinary impact on subsequent health (Sleddens et al., 2015). The particularities and responsibilities of students during academic life were identified to be responsible for the physical and mental quality of their life. The transition to university education is significant because during this period young adults experience greater freedom to make choices regarding eating behavior and lifestyle, being a period that predisposes young adults to become less physically active, even sedentary (Tanton et al., 2015).

Among medical students, an increased prevalence of dyslipidemia, obesity and cardiovascular disease was identified due to unhealthy dietary habits, sedentary lifestyle and poor quality of food consumed by them (Yahia et al., 2008). Leaving the family environment (which is identified by the decrease in the number of healthy meals), economic restrictions and the freedom to choose foods (most often, fast food) are just a few of factors responsible for increasing the rate of practicing unhealthy eating habits (Papadaki et al., 2007; Pan et al., 1999). From this point of view it is essential to identify all the factors involved in influencing eating behaviors of students in order to be able to develop effective behavioral interventions that improve the quality of nutrition among young adults.

Taste

From an early age, taste and familiarity of products influences behavior towards food (Steiner, 1977). Parental verbal and non-verbal behaviors such as the pattern of appreciation and the joy of having healthy foods (avoiding sweets as rewards) and limiting childhood exposure to fast-food products are all

strategies that increase the likelihood that individuals will develop positive attitudes toward healthy eating (Catanzaro et al., 2013). Food preferences and aversions develop through experiences and are influenced by our attitudes, beliefs and expectations (Clarke, 1998). Early exposure to aromas in utero and during breastfeeding influence young children to respond positively to foods to which they have been exposed. After the baby is born, breastfeeding will expose him to the flavors of the mother's diet. As the child grows up and is fed with solid foods, he or she will experience foods that reflect the culture of the family and community he or she is a part of. If this "programming flavor" includes bitter vegetables, this increases the likelihood that the child will accept those with a bitter taste as healthy vegetables. If the "programming aroma" focuses on fast food, sweet foods, then these are the tastes that the child will look for during its development (Beauchamp & Mennella, 2011, Mennella et al., 2011).

Another study conducted in 2010 at 6 universities in Massachusetts and Louisiana revealed that taste is the most important reason even when choosing a drink. Many students are really obsessed with their favorite brands of sugar-sweetened beverages. Because of their strong pleasure in consuming these drinks, students felt that changing them with another option would be difficult. Some recognized that their attachment to certain sugary sweetened beverages is almost addiction and taste often overcomes a rational calculation of the potential harm that consumption of these drinks can get (Block et al., 2013).

It is recognized today that food influences our condition and our mood has a strong influence on choosing a food. In this regard, studies have found that underweight individuals have a lower dietary intake than normal-weight individuals during negative emotional states and situations (which may contribute to a reduced body weight in these individuals). On the other hand, overweight individuals had a much higher dietary intake during these negative emotions (Geliebter & Aversa, 2003).

Stress

For many students, transition from high school to university is accompanied by emotional and/or psychological stress (Papier et al., 2015). Sources of stress may include demands on academic tasks, living away from home, moving to a new development stage, peer pressure, possible student conflicts and high expectations about university life, frustrations, difficulties in adapting to a new social environment, financial difficulties (Hamaideh, 2011). There is substantial evidence that stress can affect an individual's health, not only through direct physiological processes, but also by changing behaviors that affect health, such as diet and more specifically, the amount of food consumed. Some studies have shown that individuals tended to increase their consumption of high-calorie, high-fat

snacks when they were feeling stressed, while other studies reported that individuals ate less of all foods when they were stressed.

Moreover, it has been found that the intake of fast foods, snacks, sweet foods (such as chocolate, cakes, ice cream) increases among students experiencing stress, while the intake of healthy foods, such as vegetables, tended to decrease. Also, a study carried out in Australia found that a significantly higher percentage of female students suffered from stress compared with male students, results which were similarly to that among students from Hong Kong and Turkey (Papier et al., 2015).

Schedule and spear time

Time seems to be a very valuable issue when it comes to student food practices. They indicated that they would spend more time doing other activities than cooking, especially when they have to cook only for themselves (Deliens et al., 2014). Studies have shown that eating "on the run" was associated with a less healthy eating pattern among young adults. This means that eating "on the run" was correlated with higher consumption of soft drinks, fast food, total fat and saturated fat, in both sexes. (Larson et al., 2009). Also, a busy schedule (both academic and social) of students affects their eating habits, which means that, for example, during exams students want to spend as much time as possible studding, which makes it difficult to keep a healthy food program. Consequences are linked by inadequate intake of healthy foods or by choosing unhealthy foods (AlJaber et al., 2019).

Physical activity

The benefits of an active lifestyle are well documented and can lead to the improvement of physical and psychological health. For example, engaging in regular physical activity can reduce the risk of early death, heart disease, stroke, type 2 diabetes, high blood pressure, dyslipidemia, colon and breast cancer, weight loss prevention, and metabolic syndrome. In addition, physical activity offers positive effects on mood and mental health, such as reducing depression and anxiety, physical well-being, and improving cognitive functions (Pauline, 2013). Unfortunately, the highest rate of physical activity decline occurs in early adulthood, between the ages of 18 and 24 (US Department of Health and Human Services 2000). This thing happens even though lack of physical activity and the existence of unhealthy eating patterns are the leading causes of death in the US, accounting at least 300,000 deaths per year (McGinnis & Foege, 1993). The results of the National College Health Risk Behavior Survey reported: of all students participating in the study, 37.6% practice intense physical activity ≥ 3

days / week, a smaller percentage of students practice muscle building exercises ≥ 3 days / week (29.9%) or 30 minutes of moderate physical activity, such as walking or cycling ≥ 5 days / week (19.5%).

Female students are more likely to exercise to lose weight or maintain their current weight but participate less in rigorous physical activity or muscle building than male students. Despite the recommendations that suggest the combination of physical activity and healthy eating choices to achieve weight loss, among students who tried to lose weight only 53.8% of women and 40.9% of men reported using both strategies for weight control (Lowry et al., 2000).

Social and economic influences

The socio-economic status and environmental factors contribute to the adoption of unhealthy eating habits among students. The numerous malls, shops, food trucks and fast food markets have created an alarming situation for students. They tend to make food choices based on lower cost and availability of fast food products. At the same time, students lack knowledge about healthy eating choices, and this can negatively affect their eating habits as well as their nutritional status (Ganasegeran et al., 2012). The accessibility of energy-dense and low-cost foods is widespread in many European countries. Economic data shows a significant increase in sales of snacks, pastry and soft drinks in the south-east European area.

Similarly, in the last decades there has been a dramatic increase in the number of fast-food restaurants throughout the European region. Traditional foods are easily replaced by a "modern" diet, with a higher proportion of calories coming from oils, fats, sugars and starches. In two decades (from 1989 to 2009), the number of McDonald's restaurants has increased by 1000 times, each meal taken in this enclosure offering 300-500 kcal of foods rich in saturated fat and trans fats, sugar and salt, being more poor in fruits, vegetables and fiber, compared to the recommendations of dietary guidelines (Savige et al., 2007). Moreover, the consumption of fast food is one of the factors that have been reported to be responsible for obesity. Factors that influence fast-food consumption are the convenience, costs, diversity, aroma and taste. Fast food consumption, large portion sizes and sugary sweetened beverages are positively associated with overweight and obesity. It was found that an increase of only one fast food meal in one week was associated with an increase in daily energy intake of 234.4 KJ. Also, the high body mass index (BMI) was found to be significantly associated with the intake of fast food during evening or night (Shah et al., 2014).

Several types of eating behaviors are related to the ingestion of unhealthy foods, including increasing the number of meals served in city and serving snacks. In European countries, snacks are very widespread, studies show that the most common contexts for serving snacks, among young people, are: after courses

(4.6 times a week), while watching TV (3, 5 times a week) and while staying with friends (2.4 times a week) (Savige et al., 2007). Also, the frequency of meals reported as being taken in the family, in their childhood, predicts the frequency of student meals taken with someone at present. The most important effects are observed at breakfast and dinner: these meals that students remember as being taken together with the family as a child, anticipate that at present students will have breakfast and dinner with someone (De Backer, 2013). However, the overall prevalence of medical students from a university in Mongolia who do not serve breakfast was 41.7% for men and 23.5% for women. Failure to serve breakfast was associated with adverse effects on cognitive function (including memory), psychosocial function, academic performance, attendance at courses, and on mood in children and youth (Sun et al., 2013).

Social support can have a beneficial effect on food choices (Devine et al., 2003). Social support from family and friends has been positively associated with improving fruit and vegetable consumption (Sorensen et al., 1998) and enhancing health promotion by adopting a sense of belonging to the group (Berkman, 1995), participation in positive health practices, which includes: adequate nutrition, exercise, relaxation and health promotion (Hubbard et al., 1984). In contrast, students with lower levels of social support smoked significantly more and consumed more alcohol than those with higher levels of social support (Steptoe et al., 1996).

Consumption of coffee, tobacco, alcohol

Coffee, tea and cocoa are important dietary sources of polyphenols and have potential beneficial effects on cardiovascular health (Larsson, 2014). Some results show that many students consume coffee regularly and thus obtain large amounts of energy from these drinks and from the snacks associated (Lim & Kim, 2012). Also, another study showed that people with a higher genetic predisposition to obesity appear to have a lower BMI associated with higher coffee consumption (Wang et al., 2017).

Regarding smoking, a study shows that stress during college may be a contributing factor to smoking initiation. Previous studies have found a relationship between smoking initiation and increased anxiety, which suggests that medical education may have an indirect negative effect on smoking (Senol et al., 2006). About a quarter of all US students smoke (Martinelli, 1999), and 75% of them continue to smoke in adulthood (Flay, 1993), placing future adults at greater risk of developing lung cancer and cardiovascular disease. Similar trends were also observed among students in Europe (Steptoe & Wardle, 2001).

Excessive alcohol consumption among students is a widespread problem in several university campuses, being associated with other unhealthy behaviors, among which are: smoking, risky sexual behaviors - contact with multiple sexual partners, non-use of the car seat belt (Jones et al., 2001). A more recent study found that living standards significantly influence the practice of alcohol consumption among university students (Al-Naggar et al., 2013). A similar study has shown that students living in student dormitories and form student associations, tend to drink more and report more negative alcohol-related consequences than those living with their parents (Martin & Hoffman, 1993; Montgomery & Hammerlie, 1993; Valliant & Scanlan, 1996). Statistics show that in Europe, among people over the age of 15, 11.3 L pure alcohol / person / per capita is consumed, with episodic alcoholic excess being more frequent among young people. In the world, in the same age category, the total alcohol consumption is 6.4 L pure alcohol / person (WHO, 2018).

Acculturative stress

Acculturation is the process through which an individual adopts beliefs, attitudes and behaviors of the dominant culture. Specifically, people often evaluate and change their physical appearance in the acculturation process to conform to the cultural standards of beauty (Van Diest et al., 2014).

The available research shows that there are many factors that contribute to acculturative stress in international students, such as the region from origin, English fluency and social support (Jackson et al., 2019). Acculturative stress is associated with a range of symptoms affecting mental health, such as general psychological stress, depression and suicide, drug use, and eating disorders. In addition, acculturative stress is associated with poorer physical health status and an increased risk of mortality (Van Diest et al., 2014).

In USA, in a sample of various international students, it was found that students from Europe, with a higher fluency of English and higher social support, had significantly less acculturative stress than those in non-European nations, with a lower fluency of English and less social support (Yeh & Inose, 2003). Also, another study shows that most international students are not satisfied with the food on the university campuses, looking for ways to adapt by ordering food from restaurants, visiting supermarkets and relocating to campus. At the same time, most international students felt uncomfortable with the drinking culture in the United States, although some of them felt drinking was a good way to socialize with Americans and explore American culture (Yan & FitzPatrick, 2016).

International students must learn how to adapt to the host's new cultural norms country - which is Singapore in this study. In this regard, it has been hypothesized that the country of origin should have an effect on acculturative

stress; for example: international students from Malaysia (neighboring country with cultural norms and language similar to Singapore) showed lower levels of acculturative stress compared to those in China and Myanmar (probably due to the larger linguistic and cultural differences). Furthermore, Malaysian students may be less discriminated and may be easy socially accepted due to lower difficulties in English language proficiency (Nasirudeen et al., 2019).

In view of the above, it is essential that universities to recognize the potential struggles of these students, reluctance to engage in services, the use of more coping strategies and address these issues openly on campus. For example, implementation of mentoring relationships and student organizations could help create social contacts for international students from the US or any other country. Furthermore, students could be encouraged to stay in touch with those at home while developing social relations. Last but not least, universities can reduce acculturative stress by preparing students for arrival in the U.S. through various forms of information (for example, housing assistance, connection with US students, online forums and so on) (Jackson et al., 2019).

Gender

Dietary habits and physical activity are strongly influenced by attitudes and behaviors that differ by gender and promote different healthy or unhealthy lifestyles among women and men. Moreover, unequal relationships between sexes interact strongly with social, economic and cultural differences. It is worrying that unhealthy behaviors (such as not consuming five or more portions of fruits and vegetables daily, skipping meals, often eating fast food, and not practicing moderate-intense physical activity at least five times a week) have been shown to be common among young adults. (Varì et al., 2016).

Among students, women demonstrate greater awareness and stronger beliefs about the importance of positive health habits (Wardle & Steptoe, 1999), have higher consumption of fruits and vegetables and tend to have a greater interest in healthy diets and a desire to eat foods that are lower in energy than men (Varì et al., 2016), but nonetheless, women have higher morbidity and visit health centers more than men (Popay et al., 1993).

Many researches on the relationship between acculturation and symptoms of eating disorders indicate that women belonging to ethnic minorities who have assimilated their culture into Western society have an increased risk of experiencing body shape dissatisfaction and symptoms of eating disorders. For example, women belonging to ethnic minorities moving from a non-westernized country to the United States have a higher risk of developing eating disorders than women remaining in their countries of origin (Dolan, 1991; Furukawa, 1994; Silber, 1986).

Overall, results indicate that women have a higher level of nutrition related to self-determined motivation, a better quality of diet than men and a higher level of self-regulated motivation is associated with a better quality of dietary intake. Also, factors such as nutritional knowledge and attitudes may explain some gender differences in food consumption and eating behaviors (Leblanc et al., 2015).

Religion

Religion could increase the risk of developing an eating disorder due to association: fasting rituals that emphasize weight loss with behavioral disorders and the conflict between conservative expectations of the religious family vs. Western irreligiosity. Young people from religious families who give a great importance to religious ideals, worrying about body image, food and sexuality, may be at greater risk of developing an eating disorder. High rates of eating disorders have been reported among Muslim women living in Western countries (undergoing cultural transition) or who are the first generation to be exposed to the Western media. The Muslim ritual of fasting Ramadan is also proposed as a risk factor for developing eating disorders. Thus, it was concluded that religion can only be a risk factor in a subset of the population with other risk factors, such as promoting unhealthy religious beliefs (Abraham & Birmingham, 2008).

On the other hand, religion can have a positive influence on international students, being a source of spiritual support that can help students overcome adjustment problems and better tolerate their situation. However, adaptation to the host country can be very slow and not easy, because the characteristics of the host country, such as religion, language, and many others, different from the country of origin of the students (Mehdizadeh & Scott, 2005).

Role of public health (late adolescence / period of young adult - periods of high risk)

At these stages, young women, but not only, are going through a transitional period with unique challenges, which can contribute to the development of eating disorders. Unintentionally, the university environment can contribute to the development of these eating disorders by introducing certain academic, financial or interpersonal stressors. Also, the student is faced with the desire or need to choose other types of food than he was used to, higher in carbohydrates and fats. Also, in order to be accepted into the group of friends, students may feel pressured to participate in various activities within the group that do not always encourage healthy eating (Irving et al., 2003).

Regarding mental health, the available evidence suggests that a significant proportion of young adults had mental health problems. Recent data have shown that mental disorders are among the four or five of ten causes which lead, globally, to disability-adjusted life years (DALYs) for young people aged 20-24, and 15, respectively, 19 years. The mental health of young adults is a point of interest, not only because of the total effect of the disease on the individual or on the whole population, but also because these diseases can start early in adolescence and can be maintained throughout life. Student-focused research has found that depression is at least as common among students, as compared to their age group, as in the general population (Hussain et al., 2013).

Rapid changes in the epidemiology of obesity over the past 20 years may also change the continuity patterns of obesity in individuals transitioning from adolescence to young adulthood. A study identifies that of the 480 participants with a BMI> 25 kg /m2 at 24 years, 33% were never overweight in adolescence, this proportion being higher in men than in women. The persistence of the overweight status in adolescents predicted the BMI to be greater than 25 kg/ m^2. In total, 70% of those who were overweight in adolescence were still overweight at 24 years of age, while women showed lower continuity. For obese adolescents, the rate of BMI greater than 25 kg /m^2 at 24 years was very high (Watts et al., 2016).

The results of these studies should be considered a first step in developing tailored and effective intervention programs that aim to improve student eating behaviors (Deliens et al., 2014). Thus, public health plays a very important role because it contributes to the development of nutrition education and physical activity programs among young populations, programs aimed to improve nutritional habits, maintaining weight and increasing physical activity in student groups (Alakaam et al., 2015 ; Gazibara et al., 2013).

It is recommended that university administrators and researchers provide information and tips to improve the way in which food is prepared by students as well as healthy food choices (through social media, for example), to increase self-discipline control, development of time management skills, strengthening of social support and providing healthy food at affordable prices by supplying vending machines with healthier products (Deliens et al., 2014). Also, most studies suggest the need for coordinated strategies and efforts at all levels to reduce the tendency of overweight, obesity and body fat, as well as to promote youth health (Alakaam et al., 2015; Gazibara et al., 2013).

Conclusions

It has been shown that students can be influenced by a wide range of factors that can change their eating behavior, such as: individual factors, economic factors, biological factors, social factors as well as the physical environment.

Moreover, the relationships between the determinants and the food behavior of the students seem to be modulated by the university characteristics, such as residence, student societies, university lifestyle and exams. After moving from high school to university, when independence grows, students are continually challenged to make healthy eating choices. In addition, students must take these healthy food choices in a specific university setting (for example, they live in a student dormitory, have many exams) and must depend on food availability and accessibility, food preferences and prices. Moreover, during these food choice processes, students may or may not be supervised by their parents or influenced by their friends and colleagues (Deliens et al., 2014).

Thus, the transition from high school to university is a critical moment for individuals who are beginning to take definitive steps towards independence, being the first major transition, a person faces. Despite efforts to promote health, young adults continue to engage in high-risk behaviors for their health. Modifying these health risk behaviors can improve nutritional status and reduce risk of chronic diseases later in life. Evidence suggests that diseases such as atherosclerosis, obesity and diabetes, related to lack of physical activity, are most found in the second and third decades of life. However, young adults do not correlate such risky health behaviors with development and progression of these diseases. However, there is an increasing need for health promotion efforts to endorse students as a target population and to make them aware that their health is an "important public health problem, but neglected" (Kwan et al., 2013).

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MEDICAL STUDENTS' OPINION ON EUTHANASIA AND PHYSICIAN-ASSISTED SUICIDE. A THEORETICAL APPROACH

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ABSTRACT. Euthanasia and physician-assisted suicide (PAS) are controversial topics throughout the entire world. The evolution of medicine has allowed for new medical treatments to be available in the case of incurable diseases, thus prolonging the lifespan of the individual. This, in turn, has brought to light some challenging legal, ethical, and social issues related to end of life medical decisions. The aim of this study is to examine medical students' knowledge about the legalization of euthanasia and PAS, their attitudes toward them (in various countries), and their reasons for and against these acts.

Keywords*: euthanasia, physician-assisted suicide, ethics, medical students.*

REZUMAT. ***Opinia studenților medicinişti cu privire la eutanasie şi sinuciderea asistată medical. O abordare teoretică.*** Eutanasia şi sinuciderea asistată medical sunt subiecte controversate în întreaga lume. Evoluția medicinei a permis existența unor noi tratamente medicale în cazul bolilor incurabile, prelungind astfel durata de viață a individului. La rândul său, acest fapt a scos la iveală câteva probleme legale, etice şi sociale legate de deciziile medicale de la sfârşitul vieții. Scopul acestui studiu este de a examina cunoştințele studenților medicinişti despre legalizarea eutanasiei şi a sinuciderii asistate medical, atitudinile lor față de acestea (în diferite țări) şi motivele pentru şi împotriva acestor acte.

Cuvinte cheie*: eutanasie, sinucidere asistată medical, etică, studenți medicinişti.*

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Euthanasia and physician-assisted suicide in the medical profession

The fact that medicine has continually evolved, and new medical treatments are available in the case of incurable diseases has prompted challenging legal, ethical, and social issues. Improving quality of life and the prevention and relief of suffering are factors that should be taken into consideration in the process of medical decision at the end of life (Sepulveda et al, 2002).

There is a growing opinion that prolonging one's life is not always an appropriate objective and it has been debated whether euthanasia and assisted suicide are viable options and should be legalized. The controversy involving these actions take into consideration a plethora of arguments for and against them and include ethical, legal, religious, social and psychological aspects (Rodríguez-Calvo, 2019).

Materstvedt et al. (2003) define euthanasia as "a doctor intentionally killing a person by the administration of drugs, at that person's voluntary and competent request" and physician-assisted suicide as "a doctor intentionally helping a person to commit suicide by providing drugs for self-administration, at that person's voluntary and competent request". According to the authors, expressions such as 'passive' or 'voluntary' euthanasia should be discarded as the word implies action and volition.

Worldwide, there are a few countries or states where euthanasia is legal or decriminalized: Belgium, Finland, New Zealand, Netherlands, Norway, Sweden, Switzerland, Thailand and the United States (Kumar et al, 2017). Even in these countries the debate continues about the boundaries of these practices and there are still questions concerning the responsibilities of medical professionals (Zenz et al, 2015). For example, in Canada, even though nurses might be against euthanasia, health region policies may demand them to continue to be involved in euthanasia in non-related care (Pesut et al, 2019). Piili et al. (2018) argue that palliative care education is of utmost importance given the fact that physicians with special education in this area make less aggressive decisions in end-of-life care. Pieters et al. (2019) revealed that, in the Netherlands, palliative care is very low represented in undergraduate medical curricula. Medical education in this country has a tendency not to pay too much attention to competencies required to decide whether to treat.

Zenz et al. (2015) found that most medical professionals (physicians and nurses) in palliative care were hesitant to perform euthanasia or physician-assisted suicide (PAS). If asked, a small percent (5.3 %) of physicians and nurses would be willing to perform euthanasia on a patient with a terminal illness, with higher reluctance in the case of a patient who did not have a terminal illness. The first choice for most participants was treating the patient's symptoms and, also, they would consult with a colleague before any decision.

In the case of intensive care unit physicians and nurses, Kranidiotis et al. (2015) showed that more than half of them (59% and 64% respectively) are in favor of legalizing active euthanasia. However, smaller percentages (28% and 26% respectively) agree with it from an ethical point of view. Naseh et al. (2015) reported, in Iran, that over half of nurses (57.4%) had a negative attitude towards euthanasia, 3.2% had a neutral attitude and 39.5% of them had a positive attitude. In Canada, Lavoie et al. (2014) found that nurses in palliative care were inclined toward practicing euthanasia if it were legal, with more than half of them (67.3%) having a positive intention and 28.8% having a negative one.

Among the factors that influence the physician's decision regarding the practice of euthanasia in palliative care, Lavoie et al. (2015) identified perceived behavioral control, attitude (cognitive attitude contributes to physician's decision to perform euthanasia, but not affective attitude), moral norm, and patient's autonomy to be of importance for them.

Given the fact that medical professionals are faced with important ethical challenges, it is important to track and understand their views starting from medical school. Medical student are future doctors and their attitudes during their studies may shape their views as practicing professionals. End-of-life issues are an important part of the medical profession and students should be given specialized education concerning these matters.

Palliative care

When discussing topics such as euthanasia and PAS, palliative care (PC) should not be overlooked in order to better understand the bioethical landscape. Berger et al. (2018) argue that an informed opinion concerning euthanasia and PAS can be attained only after understanding the benefits and limitations of medical interventions, including PC.

The World Health Organization (WHO, 2018) defines palliative care as "an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual".

Palliative care (WHO, 2018):

- provides relief from pain and other distressing symptoms;
- affirms life and regards dying as a normal process;
- intends neither to hasten or postpone death;

- integrates the psychological and spiritual aspects of patient care;
- offers a support system to help patients live as actively as possible until death;
- offers a support system to help the family cope during the patients' illness and in their own bereavement;
- uses a team approach to address the needs of patients and their families, including bereavement counselling, if indicated;
- will enhance quality of life, and may also positively influence the course of illness;
- is applicable early in the course of illness, in conjunction with other therapies that are intended to prolong life, such as chemotherapy or radiation therapy, and includes those investigations needed to better understand and manage distressing clinical complications.

Given the complex nature of the discussion involving euthanasia, PAS and PC, Anneser et al. (2016) have the following suggestions:

- to introduce or integrate current educational activities in order to help students improve their knowledge of legal aspects (through cooperation between teachers of medical law, ethics and palliative medicine);
- to enhance students' communication skills by using video-based practice conversations with standardized patients as a way of helping them learn how to communicate in an adequate manner with patients and families about these topics;
- to associate ethical consideration and real-life experiences in the direction of helping students cultivate their own ethically reflected attitudes.

There is a need for medical students to improve their education concerning symptom control in palliative and supportive care of severe diseases (Karlsson et al, 2007). It is necessary to include PC in the medical curriculum given the fact that there is a high possibility for young doctors to encounter palliative care patients and students do not feel prepared to offer such care (Pieters et al, 2019).

Euthanasia and physician-assisted suicide: medical students' opinion

In South Africa, the study of Jacobs and Hendricks (2018) revealed that more than half of the medical student in their sample (52.7%) believed that euthanasia/PAS should be legalized. According to 57% of the participants, the patient should be the one to make the final decision concerning the end of their life. Also, almost half of the students (47.7%) believed that patients should be

helped by doctors to fulfil their requests. Although the general attitude towards euthanasia is positive, 63.5% of students would try to convince a patient to opt for a palliative treatment method instead of a life-ending intervention. Almost all students (90.6%), in the case of a patient with no known treatable medical illness, would not assist him/her with life-ending interventions. A little half of the students (54.2%) would not help a psychiatric patient to end their life. Half of the participants (50.2%) stated that they provide support for a loved one who decided to end their life because some intractable disease. When deciding who receives euthanasia/PAS, most of the students (80.1%) would prefer a dedicated ethics committee.

Another study from South Africa revealed that, although 43% of medical students believed assisted dying should be legal (with clinical students more in favor - 54.5% - compared to preclinical students - 31.4%), only 36.2% would perform a procedure linked to assisted dying, while 45.3% would not be willing to perform such a procedure and 18.5% had a neutral attitude (Marais et al, 2017).

In Mexico, the study of Guttierrez & Guttierrez (2018) revealed that 44.4% of medical students favored active euthanasia, 52.1% of passive euthanasia, and 44.8% would ask their physician to help them die if they suffered from an incurable or painful disease (positive personal posture). Compared to women, men are more in favor of both active and passive euthanasia. Students who stated no religious beliefs were more in favor of active euthanasia, passive euthanasia, and personal posture compared with non-Catholics who had more negative views on all three aspects. The authors also found important difference between participants who considered religion as strongly important and non-believers: the first group had a predominantly negative attitude towards the topic and the second had mainly a positive one.

In Brazil, living wills overcome any other non-medical opinion and doctors are under the obligation to respect the wishes of terminally ill patients, except for those who conflict with the Code of Medical Ethics. Silva et al. (2015) found that a low percentage of medical students (8%) had a clear understanding of the term "living will". However, when the term was explained to them, a vast majority of students (92%) stated that they would respect it. More recently, Kulicz et al. (2018) found a higher prevalence (23.5%) of students who declared they knew what living will was and chose the correct answer for it. However, the percentage of students who would respect the patient's living will is lower than the previous study (80.1%).

In the UK, Pomfret et al. (2018) conducted a study to investigate end-of-life decisions among medical students and the role of religion in this process. The results revealed that most of them did not agree with euthanasia and

physician-assisted suicide. Those who believed in god presented a higher chance of disagreeing with actions which expedite death, especially students from a Muslim background. The students were given six different scenarios and were asked to rate the level of their agreement (from strongly disagree to strongly agree) and to consider that the actions are legal. We present the results from these scenarios:

- "Mrs X is medically well. She is deemed competent. She wishes for the ventilator to be withdrawn. The consulting physician switches off the ventilator". 9% of students strongly disagreed, 20% disagreed, 13% neither agreed nor disagreed, 44% agreed, and 14% strongly agreed.
- "Mrs X is medically well. She is deemed competent. She wishes to die. She asks her consulting physician to help her die. The physician agrees to assist death by personally, slowly, increasing her morphine dose". 21% of students strongly disagreed, 36% disagreed, 15% neither agreed nor disagreed, 23% agreed, and 5% strongly agreed.
- "Mrs X develops a chest infection. She falls into septic shock and eventually into a coma. The doctors on ICU agree that she is brain dead and consult the family to switch off the ventilator. The consulting physician switches off the ventilator". 3% of students strongly disagreed, 6% disagreed, 11% neither agreed nor disagreed, 51% agreed, and 29% strongly agreed.
- "Mrs X is medically well. She is deemed competent. She wishes to die. She asks her consulting physician to help her die. The physician agrees to assist death personally administering a lethal injection of potassium chloride". 36% of students strongly disagreed, 35% disagreed, 13% neither agreed nor disagreed, 13% agreed, and 3% strongly agreed.
- "Mrs X is medically well. She has severe cognitive impairment as a result of her disease. She wishes for the ventilator to be withdrawn. The consulting physician switches off the ventilator". 16% of students strongly disagreed, 38% disagreed, 23% neither agreed nor disagreed, 20% agreed, and 3% strongly agreed.
- "Do you think you, as a doctor, could administer a lethal injection (eg potassium chloride) to a competent patient, like Mrs X, who wishes to die? (Please again assume that such an action is legal)". 24% agreed and 76% disagreed.

In Germany, Anneser et al. (2016) were interested in medical students' attitude and knowledge about physician-assisted suicide, euthanasia and palliative sedation and they surveyed 4th year medical students using fictitious case vignette (describing a 57-year-old patient with nasopharyngeal carcinoma) with

two versions: (1) subjectively unbearable physical suffering and (2) emotional suffering. The results showed that most students assessed palliative sedation as legal (81.2%) and euthanasia as illegal (93.7%), according to Germany's legal norms at that point in time. However, few students were aware that physician-assisted suicide did not constitute a criminal offense at that time. Palliative sedation along with simultaneously withholding artificial nutrition and hydration were considered ethically acceptable by most students (83.3%), a little over half of the students (51.2%) viewed physician-assisted suicide as an ethically legitimate action, and 19.2% thought of euthanasia as an ethically permissible act. Palliative sedation was considered legal more frequently in the first version of the scenario.

In Canada, Bator et al. (2017) found that the majority of undergraduate students (88%) in their study supported the Supreme Court's decision concerning the ban on medical assistance in dying (MAID), more than half of them (61%) would provide the means for a patient to end their life, and 38% would themselves administer a lethal medication. Educational training solicited by participants in order to prepare them for MAID included, in preferred order, medico-legal (91%), communication skills (80%), technical skills (75%), and religious (49%). The authors did not analyze students' freeform comments, but some of them indicated they would like more clinical exposure to end-of-life care and MAID. More recently, Falconer et al. (2019) found that 71% of medical students would provide MAID under a legal framework that allows it. concerning religion, Non-religious, atheist, or agnostic medical students reported the highest willingness to participate in MAID (89%), followed by Jewish (70%), Catholic (70%), Muslim (46%), and Other Christian religion other than Catholic (40%). Concerning the frequency of religious attendance, MAID is more likely to be reported among medical students who never attended religious services (89%) than among those who attend a few times per year or less (81%), about once per month (40%), or about once per week (14%).

In Sweden, Karlsson et al. (2007) found that a little over half (52%) of medical students had a negative attitude towards legalizing euthanasia, 34% had a positive one and a lower percentage (13%) was undecided. When asking questions such as 'Is there a situation when you would ask for euthanasia for yourself?', 18% answered no, almost half of them would take this scenario into consideration and 36% were undecided.

In Poland, Leppert et al. (2013) found that the legalization of euthanasia was supported by 29.59 % respondents, opposed by 47.11 %, and 23.30 % were undecided. Following palliative medicine courses, a vast majority of students (94.56 %) maintained their attitudes toward euthanasia. Most students (81.80 %) were worried that the legalization of euthanasia or PAS could lead to abuse.

A lower percentage (11.73 %) considered that the legalization would not lead to abuse, while 6.46 % declared that they did not know whether it would lead to abuse or not.

In Austria, a study spanning a period of 9 years tracked changes in medical students' attitudes toward euthanasia and the results showed an increase in rates of acceptance: from 16.3% (2001) to 29.1% (2003/04) to 49.5% (2008/09) (Stronegger et al, 2011).

Medical students' reasons for supporting and opposing euthanasia and PAS

The opinions expressed by medical students in favor or against euthanasia and PAS are not new and are like those presented in studies focusing on other professional categories. The study of Jacobs and Hendrick (2018) identified several arguments in favor and against euthanasia and PAS: students' arguments for *supporting* them are patient autonomy and relief of suffering; the arguments for *opposing* them are doctor's oath to preserve life, it is morally wrong – against personal/religious world view and constitutes a 'slippery slope' towards active involuntary euthanasia.

Karlsson et al. (2007) found the same arguments, but added a few more for opposing euthanasia, students mentioning the fear of possible negative effects on society, the strain it could cause physicians and doubts about the true wishes of the patients. Clemens et al. (2008) added circumstances that lack dignity and Leppert et al. (2013) added respect for patient's will and compassion to the list of reasons to proceed with euthanasia or PAS.

Differences between medical and non-medical students

In Spain, Rodríguez-Calvo et al. (2019) found, among medicine, nursing and law students, that their attitude was positive towards physician-assisted suicide (54%) and euthanasia (75%). Their attitude concerning their legalization was also positive. Medical students' attitude towards euthanasia and physician-assisted suicide were positive and did not differ from that of non-medical students. When asked about their attitude towards PAS, 31% of medical students strongly agreed, 32% agreed, 20% were undecided, 7% disagreed and 10% strongly disagreed. The results of nursing students are the following: 23% strongly agreed, 24% agreed, 38% were undecided, 11% disagreed and 4% strongly disagreed. Law students' percentages are as follows: 31% strongly agreed, 23%

agreed, 35% were undecided, 4% disagreed and 7% strongly disagreed. Concerning their attitude towards euthanasia, 49% of medical students strongly agreed, 32% agreed, 12% were undecided, 4% disagreed and 3% strongly disagreed. The results of nursing students are the following: 36% strongly agreed, 30% agreed, 23% were undecided, 7% disagreed and 4% strongly disagreed. Law students' percentages are as follows: 40% strongly agreed, 39% agreed, 13% were undecided, 4% disagreed and 4% strongly disagreed. However, the result also indicate that medical students place a higher value on patients' autonomy.

In Pakistan, Kumar et al. (2017) found that medical students (57.6%), compared to non-medical students (42.9%) favored continuing maximum medical treatment including CPR. Most non-medical students (83%) and less than half of medical students (46%) believed euthanasia is an acceptable practice. Also, the authors found significant difference between male and female students: the former seem to be more in favor of euthanasia while the latter are more in favor of providing maximum medical treatment.

Gruber et al. (2008) found several differences between medical and non-medical students and between senior and junior medical students. More specifically, more non-medical students believed that cardiopulmonary resuscitation must always be provided than medical students. Also, more first year medical students felt cardiopulmonary resuscitation must always be provided than fifth year students. Interrupting life-support therapy had a higher acceptance rate among senior medical students compared to junior medical and non-medical students. 64% of non-medical students and half of year 1 medical students considered acceptable the administration of fatal doses of drugs to patients with limited prognosis. Students with more years of training were less accepting of euthanasia. When taking into consideration the limitation of life-support therapy, students believed patients (98%), doctors (92%) and families (73%) should be involved, but fewer believed nurses should be involved (38%).

Differences between medical students and experienced physicians

In a study conducted among Polish medical students and physicians, Leppert et al. (2013) found most of both categories were against euthanasia (82 % and 90 %, respectively). Concerning the legalization of euthanasia, most of them were against it (67 % of students and 75 % of physicians). Low percentages of both students and physicians would provide full information to patients with advanced cancer (28 % students and 24 % physicians). Natural death was chosen by most students and physicians (70%) in the case of diseases without cure.

Alminoja et al. (2019) found, exploring the difference between medical students and general practitioners (GPs) regarding end of life (EOL) care decisions, that the former was more unwilling to withhold and withdraw therapies than were the latter. More specifically, GPs withdrew antibiotics and nasogastric tubes and withheld resuscitation, blood transfusions and pleural drainage more often than did the students. Also, in students' opinion, euthanasia was less reprehensible. Ethical decisions among GPs were more strongly associated with religion than in the case of students. Most of both students and GPs rated their own health as excellent, did not experience burnout and being a doctor gave them satisfaction.

Conclusion

Given the complexity and challenging nature of euthanasia and physician-assisted suicide, it is important to know and understand medical professionals' opinions on these aspects, starting from medical school. Of equal importance, attitudes and knowledge on palliative care should be tracked among physicians, nurses and medical students. Medical students should acquire important knowledge on these issues and ethics education could help them improve the care provided to their patients. Also, it might help them to better adjust to their future roles as doctors.

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INFERTILITY AS A CURRENT CHALLENGE. MORAL AND ETHICAL APPROACH

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ABSTRACT. The issue of Infertility, even though it is not a new problem, it becomes challenging because of its moral, ethical, spiritual, physical, psychological and social implications. As the conception process techniques become more divers and deviant from the natural process, moral implications start to emerge. In vitro fertilization (IVF), in vivo fertilization, surrogacy, embryo cryopreservation, prenatal diagnostic etc., all of these new medical techniques and concepts arise many new ethical and moral aspects for Christians. The fertilization methods become more unnatural and this fact involves some issues related to the human being and the value of life. What is technically possible does not necessarily have to be ethically correct. What is the official position of the Church about this medical concern? How can we improve the communion of love between spouses, even without children? Does the wish to have children entitles me to use every medical conception techniques or we should accept the reality? What is the most useful and right method to fill up the gap and the absence of children in a family's life? Every family has its particularities and in every case we should consider the positive and the negative aspects of using the modern conception techniques. It is proper that, in this issue, to be involved priests, theologians, medics, psychologists, even friends or relatives, in order to underline what are the main risks and the implications of using modern methods of assisted reproduction.

Keywords: *infertility, fertilization techniques, adoption, bioethics, Christian morality.*

REZUMAT. ***Infertilitatea ca provocare actuală. O perspectivă morală.*** Infertilitatea, chiar dacă nu este o problemă nouă, este actuală datorită provocărilor şi implicaţiilor care le ridică tehnica medicală de concepţie. Din punct de vedere moral şi etic, implicaţiile devin cu atât mai mari cu cât tehnicile de intervenţie asupra procesului concepţiei sunt mai diversificate şi mai deviante de la procesul natural. Fertilizarea in vitro (FIV), fertilizarea in vivo, mamă surogat, criogenizarea embrionilor, diagnosticare prenatală, etc., toate aceste noi tehnici medicale şi concepte ridică numeroase aspecte etice şi morale pentru creştini. Metodele de fertilizare devin tot mai nenaturale, iar acest lucru ridică probleme serioase legate de fiinţa umană şi valoarea vieţii. Ceea ce este posibil tehnic nu înseamnă că este corect din punct de vedere etic.

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Chiar dacă procrearea este unul dintre scopurile căsătoriei, aceasta nu înseamnă că este unicul scop. Soții pot să își desăvârșească legătura dragostei chiar și în cazul în care nu pot avea copii. Legat de problema infertilității, se ridică câteva întrebări. Dorința de a avea copii mă îndreptățește să apelez la tehnicile medicale sau trebuie să accept realitatea? Care este poziția oficială a Bisericii despre această problemă? Care este cea mai potrivită metodă de a umple golul și lipsa copiilor din viața unei familii? Fiecare familie are particularitățile ei, iar în fiecare caz trebuie să se țină cont de aspectele pozitive și negative ale utilizării metodelor moderne de concepție. În această problemă este indicat să se implice deopotrivă preoți, teologi, medici, psihologi, apropiați, pentru a explica celor aflați în dificultatea de a avea un copil, care sunt riscurile și implicațiile utilizării metodelor moderne.

Cuvinte cheie: *infertilitate, fertilizare in vitro, adopție, morală creștină, bioetică.*

Introduction. The nature of the problem

The crucial and irreversible moment of the beginning of life is, undoubtedly, the moment of fecundation. The union of two gametes is the irreversible moment that marks the beginning of human existence and it determines the whole evolution of life[2]. The human reproduction act, by artificial fecundation, should not be considered only a simple act of reproduction. It is also a recent form of intervention in God's creation[3]. Children must be the result of the love and affection of spouses and not the result of a medical intervention, because love is the central principle of life and family. In the act of love I am not simply giving myself bodily, just to produce a child. In this act of creation my whole being is involved, body and soul, feelings and will, not only my body. Therefore, when we speak about infertility and artificial reproduction techniques, as urgent methods of solving this problem, we have to take into consideration the dignity of the human life as a main Christian value. On the other side, we must not forget about the pain of those who cannot have children in a natural way and the fact that these current methods are used to fulfil or to satisfy the wish of having children. "The reproduction through intervention objectifies the privacy or the

[2] Georgios Mantzaridis, *Morala Creștină*, Ed. Bizantină Publishing House, Bucharest, 2006, p. 456. At the foundation of human being, Christian theology sets the principle of love. First of all, there is the love of God and second, it is the love between the man and the woman. Nowadays, it is promoted the concepts of having love without children and also having children without love.

[3] Georgios Mantzaridis, *Morala Creștină...*, pp. 457-458. Even the term of artificial reproduction means that the process is not a natural one because it introduces, in this equation, the technique and the technology; it intervenes in the natural way of how human life begins. Using those artificial methods means that something in this process it is not natural, it is not normal anymore.

mystery of human life[4]." It is of great importance that the family who faces these difficulties to give close attention to other Christian purposes of marriage and one of the main purposes is salvation or redemption.

The main concern is that we are playing with the concept of life, using artificial methods, and we also have to consider the fact that we are not the masters of life and creation; we are just participating as co-creators in this world. Doing so, we demonstrate that our desire is stronger than God's will, so, this is a selfish act. To intervene in the process of creation means forcing things to happen, in one way or another and this fact is not natural. We can become experts in medical and assisted intervention but not experts in creation:

> "Despite all of our medical expertise, we still don't know exactly why and how a new life starts or, in many cases, fails to begin. Nor can we be sure of the result when we seek to assist or even force the process by artificial means. Instead of achieving our desired objective—a healthy baby—by utilizing ART, we could easily wind up worsening our reproductive potential or creating one or more babies with severely compromised health[5]."

Christianity has always claimed that life is a gift from God and this is the main reason we have to protect and respect it. The human person has been created by God Himself, after His image and every person's vocation is to become as God[6]. "Orthodoxy affirms that life is a gift, given to us, in a free way, by the God of love. Therefore, human life must be greeted with joy and gratitude. It must be treasured, conserved and protected as an expression of God's creative will[7]." God created the human kind by His image and He gave us this status of human person, not only simple beings, like the animals are. We can say that the human being becomes a real person even from the moment of conception, or he is becoming a person from that mass of cells that are starting to unite, divide and to take shape[8].

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[4] Georgios Mantzaridis, *Morala Creştină...*, p. 466. Through these interventions, the conception and the birth of human life is passed to another impersonal relationship, between the man and technique. By using this process, the child is born not only from parents, but also from specialists.

[5] Attila Toth, *Fertile vs. Infertile*, Fenestra Books Publishing House, USA, 2004, p. 2.

[6] This vocation consists of a deep search for truth, wisdom, mercy, inner beauty, love, and other Christian virtues. See Mircea Gelu Buta, *Bioetică şi slujire creştină*, Renaşterea Publishing House, Cluj-Napoca, 2017, pp. 171-179.

[7] John Breck, *Darul sacru al vieţii*, Patmos Publishing House, Cluj-Napoca, 2001, p.5. It is God that brought us from non-existence to existence and not only for a biological and physical existence. He has chosen us for a much higher spiritual purpose.

[8] There are some theories that speak about the moment of becoming a real person and the moments before this, because conception is not a moment, it is a process that can take from 36 to 48 hours. Thus, we can speak about „pre-embryo" – a mass of undetermined cells and „embryo". It is thought that the pre-embryo does not have soul and so there are no moral implications linked to it. But some say that even in this stage the pre-embryo is an embryo and a human being in potency; a real life is forming and

Nowadays, the medical research and technique is able to control and to sustain life, to discover new possibilities of improving the quality of life, cure some diseases, to remedy infertility and to control fertility by some stimulant drugs. Therefore, we can agree that the confidence in technology is growing nowadays, especially when we are struggling with medical concerns. The following paragraph describes what exactly the medical developments produce:

> "These scientific advances also have undesirable consequences and can be misused for undesirable ends. These developments create, as the early theological commentators saw, moral ambiguity. The ethical problem is how to enjoy the benefit without the detriment or how to unravel the ambiguity so that the least detrimental effects flow from the benefits. Bioethics was a needed adjunct to the publicity of the new medicine and science: it was a commitment to take seriously the adverse effects of medical and scientific progress, an acknowledgment that medical "miracles" are indeed marvellous but marred[9]."

The problem is how infertility is perceived by us[10]? As a malady or disorder, a kind of illness that should be immediately treated? Is it God's punishment for our sins? God's will or plan with us? Who or what is guilty for my infertility? Where should we go first? What should we do? These are the main questions that one may ask himself when struggling with this problem. We also have to mention about another major ethical concern about those people who want to donate sperm or eggs in order to earn money[11]. In any particular case, it is very

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so we need to treat it with respect. There is also another theory saying that the human being is formed after two weeks, after the first human features start to appear. However, human life must be respected in every stage of its evolution. John Breck, *Darul sacru al vieții...,* pp. 112-118, see also Norman Ford, *When Did I Begin? Conception of the Human Individual in History, Philosophy and Science,* Cambridge University Press, 1988; Thomas A. Shannon and Allan B. Wolter, OFM, "Reflections on the Moral Status of the Pre-Embryo", *Theological Studies* 51/4, December, 1990, p. 603-625; Roman Tarabrin, *Probleme bioetice referitoare la momentul apariției persoanei umane în decursul dezvoltării embrionare*, in „Mitropolia Ardealului", Andreiana Publishing House, Sibiu, nr. 3, 2019.

[9] Albert R. Jonsen, *The Birth of Bioethics*, Oxford University Press, New York, 1998, p.399. Of course, the main issue remains how can we enjoy the benefits from modern medicine but still to remain between the borders of morality and not to deny our Christian values?

[10] If we analyze the definition of infertility we can observe that infertility is the failure to achieve conception after at least one year of unprotected intercourse with reasonable frequency. This is a technical definition that does not include the love and the affection between spouses, only the practical part, the need for having children.

[11] We must mention that the procedure of donating eggs can be harmful for a woman and also, the method of obtaining sperm from men is morally unacceptable (masturbation). Also, those who are disposed to donate are not conscious about the fact that they could have many children spread through the world. They think that they help others and also themselves, by earning some extra money, but in fact it increases the possibility of incestuous relationship between two persons born by medical intervention. See Georgios Mantzaridis, *Morala Creștină...*, p.464.

important to take into consideration every moral implication of using medical intervention in procreation. Suitable biological and theological information is absolutely necessary when we approach this kind of issues and also reaffirming our ethical reference point, because otherwise we risk becoming lost into a technical world that is heading to nowhere[12]. In this study, we do not insist on the causes[13] of Infertility, yet we are treating this subject from an ethical and moral point of view.

Fertilization Techniques. Moral and ethical implications

Infertility is a concerning problem for our societies[14]. We are already familiar with the definition of infertility as the inability to conceive naturally after one year of regular unprotected intercourse[15].

Nowadays, the medical techniques are improving with a great speed. Modern medicine is capable of helping those couples who are not capable of having children on natural way because of infertility problems. In general, reproductive technologies are defined as technologies designed to intervene in the process of human reproduction, or application of biotechnology to problems of fertility and practices of childbearing. Therefore, Assisted Reproductive Technology (ART) is the modern medical technology that allows us to intervene in the reproductive process, but only after establishing the right diagnosis and when that couple decided in what direction that kind of treatment will take.

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[12] See Irineu Pop Bistriţeanul, *Curs de Bioetică*, Renaşterea Publishing House, 2005, pp. 13-39. Some of the Orthodox representative persons do not consider Fertilization techniques a good method of solving the problem of infertility. These techniques are producing a huge violation to the natural laws of reproduction. Procreation is a sacred act and a sacred commandment of God. This act is taking place into the mystery of the family and for this reason it is unacceptable to intervene into this natural process.

[13] See Tammy J. Lindsay, Kirsten R. Vitrikas, *Evaluation and treatment of Infertility*, in „American Family Physician", vol. 91, nr. 5, March, 2015. As we can observe, for a better quality of life it is recommended a healthy lifestyle that includes avoiding drugs, healthy food consumption and maintaining a healthy spiritual life. It seems like one of the main causes of infertility is an inappropriate lifestyle.

[14] The World Health Organization believes that between 60 million to 80 million couples in the world are infertile. Those couples that experience infertility have also different problems and feelings linked to this main concern, such as: confusion, frustration, fear, isolation, guilt and shame, anger, sadness and hopelessness etc. See Ferring Pharmaceuticals, A *guide to managing infertility.* Can be accessed at: https://www.ferring.com/media/2696/aguidetomanaginginfertility.pdf Accessed in 15.12.2019.

[15] Shahnaz Anwar, Ayesha Anwar, *Infertility: a review on causes, treatment and management*, in "Scient Open Access Journal", vol. 2, Issue 6, June, 2016.

In vitro fertilization (IVF) is one of the most used techniques of fertilization worldwide[16]. Since 1981, approximately 200 000 babies were produced by this method in USA[17]. One of the most concerning aspect of IVF intervention is the embryos preservation:

> "Most clinics today allow embryos to grow in lab culture for at least three days after the eggs and sperm are mixed. Some even allow development for five days before transfer in order to decipher better which embryos are more likely to survive. The remainder must be disposed of, usually by freezing for later use, using for experimentation, or simply discarding. There are at least 400,000 embryos frozen in US clinics alone, but there may be as many as a half-million[18]."

In this case it is obvious the humiliation of human value[19]. The human being is treated and perceived as an object of experiment and this kind of approach is a great disadvantage from an ethical point of view. This is the sad reality we are experiencing nowadays, and this shows exactly what man is capable of. Many embryos are kept frozen for other later interventions and this fact raises many moral implications. There is also a problem of dispersing or changing the value of maternity and paternity, or the entire concept of parenting. Therefore, a child can have, at the same time, a biological mother (the donor of the ovum), another bearing mother (surrogate mother) and also a social mother (who cares for him). At the same time, these children can have a biological father (the donor of the sperm, maybe anonymous), a social father (who grows and cares for him) and the medic that, in one way or another, participated at his conception by using in vitro fertilization or in vivo fertilization[20]. As we conclude, there are many possible combinations and the results are the multi-parental children and those children may suffer from a

[16] Every country has its own legal aspects about medical assisted procreation procedures and how should they be applied correctly. Cloning, Post-mortem fertilization, choosing the child`s sex, the consent of spouses and donors, surrogacy, gametes cryopreservation and many other aspects should be presented and known by every person involved. See Ierotheos Vlahos, *Bioetică și Bioteologie*, Christiana Publishing House, Bucharest, 2013, pp. 247-263.

[17] Vincent Barry, *Bioethics in a cultural context*, Wadsworth Cengage learning, USA, 2012, p. 206.

[18] Vincent Barry, *Bioethics...*, p. 206. Not only the embryos are frozen but even the eggs and sperm, in order to make other attempts of artificial fertilization, for those who have tried and for others that did not try it yet.

[19] Georgios Mantzaridis, *Morala Creștină...,* p. 462.

[20] Georgios Mantzaridis, *Morala Creștină...*, p. 463. It is also possible, in some rare cases, that the artificial fecundation is a cause of incest. What if a married couple, both of them made by IVF, discovers that they have a common donor, this means that they are, in fact, brother and sister. This fact may destroy their entire relationship.

genealogical confusion, not knowing who is their real mother or father. At the same time, in these cases, the image and the central value of the family, as a communion of love and affection, is beginning to shatter.

One of the modern techniques is Pre-implantation Genetic Diagnosis (PGD), and it is used to investigate the embryos for genetic defects and disposal for diseases or malfunctions. By analyzing some embryos, we could select only those who are good and the others are eliminated. So, we may speak about discrimination and the inequality in rights of this unnatural selection. To continue the improvement of the technique and to ensure the development, many embryos are used for experiments, other are being destroyed. This fact is immoral because every embryo is a human being, in an incipient state: "Embryos are genetically unique human organisms, fully possessing the integrated biologic function that defines human life at all stages of development, continuing throughout adulthood until death[21]." Destroying other embryos is another form of abortion and abortion is an immoral act and also, it is a sort of genetic manipulation[22].

ICSI (intracytoplasmatic sperm injection) is another technique that injects sperm cells, using a thin needle, directly into the eggs nucleus. Using this method, some clinics guarantee a 90 percent rate of success. "Such possibilities, in which human freedom intervenes to make choices possible, force us to reflect upon the meaning of the bond between parents and children[23]." The human body became an instrument of obtaining a child and those techniques endanger most of our Christian moral values such as: love, intimacy, communion and affection between spouses and their children.

Surrogacy is another opportunity or technique used by those who cannot have their own children. A woman (the surrogate mother) decides to become pregnant for the purpose of gestating and giving birth to a child for others to rise. We can see in this paragraph how complex is this technique and how many implications are involved:

> "There are two main types of surrogacy: complete and partial. In a complete (gestational) surrogacy, the commissioning couple undergoes IVF and the resulting pre-embryo is transferred to the surrogate mother, making the biological parents become the secondary or rearing parents. The surrogate

[21] Maureen L. Condic, *Life: defending the beginning by the end*, in „*First Things*", May, 2003, p.50.; can be accessed at: https://www.firstthings.com/article/2003/05/life-defining-the-beginning-by-the-end, Accessed in 28.11. 2019.

[22] See Brad Harrub, *The inherent value of human life*, in „*Reason and Revelation*", July, 2002, pp.49-56. There are also other social implications involved in this medical process. The costs of transporting embryos and preserving them in a long term centre are very high and not every family can afford this kind of expensive services.

[23] Brad Harrub, *The inherent value of human life...*, p.12. There is a moral meaning of the biological bound between parents and children, but on the other side, there is a spiritual and ontologically bound that is more important than the biological one.

becomes the birth or gestational mother of the child. In a partial (traditional) surrogacy, the surrogate mother agrees to be artificially impregnated by the "husband's" sperm and she becomes, therefore, both the baby's biological and birth (gestational) mother, as distinguished from the child's rearing mother, the wife. In a variation, a donor of the egg may be fertilized in vitro by the husband's sperm cells, then implanted in another woman who carries the child to birth. In this case, the surrogate is the birth mother, the egg donor and the husband are the biological mother and father, and the husband and wife are the rearing parents. In some rare situations, the surrogate mother is impregnated with donor's sperm or donor's embryo, in which cases there will be a rearing couple, biological parents, and a surrogate (birth) mother. If the surrogate (birth) mother is married, her husband also can be considered the father of the child[24]."

From the moral and ethical point of view, this practice is not recommended, although the payment for such a method is quite significant, for the surrogate mother. In this case the unity of the family is endangered, by introducing a third part into this equation. Orthodoxy affirms that the Church could not agree with these methods because this is a form of fighting against God[25]. These artificial methods disrupt the spiritual bound and the connection between spouses and deny their union and the procreative meaning of their conjugal act. Using these unnatural, medical and technical methods we risk becoming dehumanised, shattering the unity of the family. Also, they involve serious psychological and physical risks, especially for women. They involve even the exploitation of persons, commercialization and other risks.

Infertility has always been a challenge for scientists that tried to find some methods to come in aid of any patient and any possible case, to offer them what it could not be done naturally. Instead, they omitted the moral aspects of these methods and, inevitably, we have reached to a sexual cells and embryo manipulation, fact that cannot be accepted by Church's canons or rules[26].

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[24] Vincent Barry, *Bioethics...*, p. 207. In these cases, things are getting complicated, many psychological, social, moral and legal problems are involved and in parallel, there are serious causes of disorder in the cohesion of the family. The surrogate mother may ask her rights for giving birth of that baby and also, by pregnancy and giving birth she can become sentimentally attached with that child.

[25] Hiding under the pretext of human rights, human autonomy, false and misunderstood freedom, we are turning our back to God and fighting against His will. See the official document of the Orthodox Russian Church, Sinodul Episcopal Jubiliar al Bisericii Ortodoxe Ruse, *Fundamentele concepției sociale a Bisericii Ortodoxe Ruse*, Moscow, 13-16 August, 2000, in Ioan I.Ică Jr., Germano Marani, *Gândirea socială a Bisericii*, Deisis Publishing House, Sibiu, 2002, pp. 243-246.

[26] Christa Todea-Gross, Ilie Moldovan, *Îndrumarul medical și creștin despre viață al Federației Organizațiilor Pro-vita din România*, Renașterea Publishing House, Cluj-Napoca, 2008, p.262. Having a child born using these methods is not normal because when we speak about embryos culture is the same like we are speaking about microorganism's culture or plant cultures with no soul, not about real

Possible solutions to infertility

First of all, we have to mention that giving a cure for infertility is a great provocation because we have to take into consideration every socio-cultural and religious aspect of the environment where the issue appears. Every case is special because of its particularities; therefore we cannot apply the same method for every single case. Also, the legal and cultural spectrum of the world is very different[27], although we are living in the context of globalization.

For a couple, the problem of not having children, by natural means, is a serious one and it can be a cause of real suffering for them. Instead, having children is not the only purpose of our life[28]. Some authors make a clear distinction between reproduction and procreation[29], because our goal is not to reproduce and to keep the human kind alive. One of our goals is procreation, to be co-creators of life, co-workers with God in the process of creating life. If one cannot have children, there is a reason why they cannot make children and they must understand this fact. If we look into the Holy Bible we can see many examples of infertility and how this problem was solved. For example, Isaac prayed to God for her wife, Rebeca, because she cannot have children and God listened to his pray and gave him a child[30]. Probably, some couples do not trust or they do not try this method, but praying and having faith in God means having a positive attitude. Therefore, a positive way of thinking brings a positive way of living, without stress, frustrations, other negative feelings and psychological obstacles. For others, the method of praying to God din not had any result and they realize that God's plan is different with them, so there should be another way of manifesting the love for children.

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human persons created as the image of God. Therefore, this is a shameful and improper act to give birth to a human person. „We must respect and maintain the sanctity of mother's womb if we want to keep our humanity." Stanley Harakas, *Contemporary Moral Issues Facing the Orthodox Christian*, Minneapolis, 1982, p. 88-92, in Irineu Pop Bistriţeanul, *Curs de Bioetică*, Renaşterea Publishing House, 2005, p. 25.

[27] For example, in India, adoption is not a solution because of the ideology of life and family. Also, in Islam adoption is prohibited because there are no blood ties with the father and no maternal bound of that child. Arthur L. Greil, Kathleen Slauson, Julia McQuillan, *The experience of infertility: a review of recent literature*, in „*Sociology of Health and Illness*, January, 2010, 32(1), pp. 140-162.

[28] In some cases, the relationship and the love between spouses still retains its character, despite the intense desire of having children. They still remain in communion of love, preserving the Christian values and following God's will in life, so that they grow together in the communion of marriage.

[29] Gilbert Meilaender, *Bioethics: a Primer for Christians*, William B. Eerdmans Publishing Company, USA, 2005[2], pp. 10-12.

[30] Genesis 25, 21. Praying to God can be a solution for this concern and the examples from the Bible are eloquent in this sense. Nowadays, there are some special cases when people tried several methods of assisted conception without any positive result and after praying to God, they succeeded on a natural way.

One of the most common solutions for this problem is adoption. Adopting a child is a way to improve your life, as Pope Francis describes in "Amoris Laetitia"; a simple and a generous way to become parents:

> "The choice of adoption and foster care expresses a particular kind of fruitfulness in the marriage experience, and not only in cases of infertility. In the light of those situations where a child is desired at any cost, as a right for one's self-fulfilment, adoption and foster care, correctly understood, manifests an important aspect of parenting and the raising of children. They make people aware that children, whether natural, adoptive or taken in foster care, are persons in their own right who need to be accepted, loved and cared for, and not just brought into this world[31]."

Adoption can be a real chance to expand the marital love and it is a true act of love[32], offering the gift of a family to someone who has none. Although, for some persons it is hard to take care for a child that is not their own, but doing so, they make themselves channels of God's love for those who need care and attention.

Fostering is another well known method of taking care of children, given up for adoption, or those children that come from poor families, for a determined period of time. Educating and helping those without possibilities is a good method of expressing parental love and care. When the spouses are not able to bring into the world a child, the holy Tradition of the Church teaches them that they are not completely unable to apply and manifest their parent vocation and they can always reach to adoption or fostering, trying to take care of that child, with love and offering, as it is their own[33]. Therefore, the main purpose of marriage is not only to give birth to children, because marriage has also a spiritual meaning, not only a physical one. By taking care of other children we fulfil the spiritual meaning of family, sharing the marital love with them.

Conclusions

Although there are several points of view about the moment of the beginning of life, it is naturally that human life begins when the process of fertilization takes place. For this reason, every artificial intervention is an attempt to deny the value

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31 Pope Francis, *Amoris Laetitia*, Vatican Press, 2016, p. 137.

32 Ierotheos Vlahos, *Bioetică și Bioteologie*, Christiana Publishing House, Bucharest, 2013, p.259-261.

33 Iuvenalie Ionașcu, *Teroriștii uterului: Terorism științific și etica începuturilor vieții*. *Eseu de Bioetică a gestației*, Anastasia Publishing House, Bucharest, 2002, p. 180.

of the human life. As we mentioned, human life is a generous gift from God and we have the moral responsibility to protect and to respect this gift.

Infertility has been known as a problem and not always the solutions to this issue are solved morally and ethically correct. Some people are tempted to try out every single method that modern medicine is able to offer them, but they do not understand the fact that, probably, their infertility is not a true reason to try these methods. Having children is not the only reason of our existence; spouses can live in harmony and communion of love even without children. Every person that is dealing with this issue must know the positive and the negative aspects of these interventions, the moral and ethical implications and the risks. Even if they deal with in vitro/vivo fertilization, surrogacy and any other type of medical intervention, the moral implications are the same for each method. Even if the Church does not prohibit these techniques, the advice is not to use them because we should not intervene into the natural process of procreation.

The assisted procreation techniques are unnatural ways of procreation; they dehumanize and they do not respect the value of life, therefore, every kind of intervention is a humiliation and disrespect for human life and the value of the human person.

Couples should understand that they are not left alone to handle with those situations, because in every society the help comes not only from medics, it also comes from Church, our relatives, friends, psychologists, that should work together to understand every case in part, and to let the couple decide what is the correct answer to their problems. As we described, there are some possible solutions to the problem of infertility, other ways to express the need of love, and the special need for parenthood.

Adoption and foster parenting are the most used and recommended methods for expression of love and care for abandoned children, in case of infertility. In every country the legal support helps families to adopt or to take care of children and to give them a better chance of a normal life.

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USING AN ETHICAL LENS TO ANALYZE HOW THE BENEFITS OF A MODERATE WINE CONSUMPTION ARE PRESENTED IN THE SCIENTIFIC LITERATURE

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ABSTRACT. The scientific literature on the benefits of wine consumption is full of controversy. Many of the ethical issues related to these researches were broken and caused results to be doubted. Wine, one of the oldest alcoholic beverages known, has sparked quite a controversy regarding its negative side effects (because of its alcohol concentration). However, wine, unlike other alcoholic drinks, does have its positive side-effects, that are commonly overlooked. In various medical, behavioural, nutritional and psychological studies, the beneficial traits of a moderate wine consumption are underlined. This study wants to gather data that explain, from an interdisciplinary point of view, why wine can serve as social, psychological, medical but also cultural and traditional aid in human development.

Keywords: *ethics, health, alcohol consumption, research, medicine, psychology*

REZUMAT. ***O privire etică a analizei beneficiilor consumului moderat de vin prezentate în literatura ştiinţifică.*** Literatura ştiintifică cu privire la beneficiile consumului de vin este plină de controverse. Multe dintre aspectele etice legate de aceste cercetări au fost încălcate şi au determinat ca rezultatele să fie privite cu neîncredere. Vinul, una dintre cele mai vechi băuturi alcoolice, a stârnit o controversă cu privire la efectele sale negative (din cauza concentraţiei sale de alcool). Cu toate acestea, vinul, spre deosebire de alte băuturi alcoolice, are şi efecte pozitive, care sunt adesea trecute cu vederea. În diferite studii medicale, comportamentale, nutriţionale şi psihologice, sunt subliniate trăsăturile benefice ale

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unui consum moderat de vin. Acest studiu dorește să adune date care explică, din punct de vedere interdisciplinar, de ce vinul poate servi drept ajutor social, psihologic, medical, dar și cultural și tradițional în dezvoltarea umană.

Cuvinte cheie: *etică, sănătate, consum de alcool, cercetare, medicină, psihologie*

Alcohol consumption and medical studies

Alcohol is a complex component of the diet and appears to have multiple effects on appetite *(Yeomans et al., 2003)*, increasing adiponectin and ghrelin. The scientific interest in investigating the beneficial effects of moderate alcohol consumption on health was born at the end of 1950 in the Seven Countries Study and since then, numerous epidemiological studies have confirmed the inverse relationship between moderate alcohol intake and risk of cardiovascular morbidity and mortality *(Romeo et al., 2007).* Moreover, many studies have identified that drinking moderate amounts of alcohol as compared to abstinence has benefits for better health and longer life expectancy. Several epidemiological studies have shown an association between moderate alcohol intake and reduced risk of BCV and ischemic stroke, these cardio protective effects being observed not only in healthy people, but also in patients who have suffered from myocardial infarction, stroke or hypertensive risk. Also, even though alcohol is a known carcinogen, the results of other studies suggest that alcohol can reduce the risk of cancers, such as rectal cancer and renal cell carcinoma *(Nova et al., 2012).*

In particular, epidemiological and experimental studies have shown that moderate wine consumption, especially red wine, mitigates cardiovascular, cerebrovascular and peripheral vascular risks, these cardio protective effects being attributed to both components of the wine: the alcoholic portion and, more importantly, the non-alcoholic portion containing antioxidants (including resveratrol, catechin, epicatechins and proanthocyanidins). Recent studies have shown that resveratrol and proanthocyanidins are the main compounds present in grapes and wines, both of which play a crucial role in cardio protection and more than that, wine can increase the lifespan by inducing gene longevity (*Bertelli & Das, 2009*).

About wine and nutrition benefits

Wine is a traditional alcoholic beverage obtained by fermenting the grape must, the quality of the wine thus being linked to the composition and variety of grapes. In general, the average concentrations of the major components

of the wine are water - 86%, ethanol-12%, glycerol, polysaccharides or other trace elements-1%, different types of acids - 0.5% and volatile compounds-0.5%. Based on the amount of sugar, the content of alcohol and carbon dioxide, the color, the grape variety, the degree of fermentation, the ripening process and the geographical origin, the wines can be classified as red, white and rosé wines.

Red wines are obtained by maceration- fermentation of the must (with skin and seeds) and white wines are produced exclusively by fermentation of the grape juice, so the red wine will contain 10 times more phenolic compounds than the white one. Although the antioxidant property of red wines is correlated with their phenol content, not a single compound sufficiently defines the total antioxidant capacity, due to the potential synergistic antioxidant effect of other compounds *(Markoski et al., 2016).*

Wine, as an alcoholic beverage, has approximately 7 calories per gram and can be considered as food because it provides energy and contributes to body maintenance. Also, studies estimate that 70-75% of the calories from alcohol can be considered to be physiologically available for body maintenance and work energy. Moreover, wine contains a small number of vitamins such as riboflavin, niacin, pyridoxine and folacin but has considerably more iron than beer, for example, and has a favorable potassium to sodium ratio (*Baum-Baicker, 1985*).

Wine and physical health

It has been estimated that the drug use of wine dates from the 2200s before Christ, making it the oldest known drug, being used as an antiseptic, painkiller and medicine for treating dermatological diseases and digestive disorders. In the early 1990s, the media release of the "French Paradox" highlighted the health benefits of red wine in the United States, prompting researchers to examine and find explanations for the new connections between wine and health *(Guilford & Pezzuto, 2011).* Also, interest in the potential benefits of wine increased when international studies showed that people in wine-consuming countries had a lower risk of mortality from coronary heart diseases than in countries where inhabitants favorite beverages were beer or liquor. Moreover, Danish studies show that wine consumers, compared to beer or another alcoholic beverage, have lower risks of total mortality, cancer and stroke and a French report indicates lower mortality from cardiovascular diseases (*Klatsky et al., 2003*).

The term "French Paradox" was invented in 1992 from the epidemiological observation that some French populations had a relatively low incidence of coronary heart disease, despite of a relatively high dietary intake of saturated fatty acids. According to the Food and Agriculture Organization of the United

Nations, overall dietary fat consumption in France in 2003 was approximately 168 g / capita / day, compared to 155 g / capita / day in United States, 134 g / capita / day in the United Kingdom and 126 g / capita / day in Sweden. Although total alcohol consumption was ~ 255 g / capita / day in France, 269 g / capita / day in the United States, 340 g / capita / day in the United Kingdom and 211 g / capita / day in Sweden, wine accounted for approximately 57% of total alcohol consumption in France, 7% in the United States, 15% in the United Kingdom and 22% in Sweden. However, according to the atlas of the global epidemic of heart disease and stroke issued by the *World Health Organization*, in 2002, the death rate from coronary heart disease in France (0.8%) was two or three times lower than in the United States (1.8%), the United Kingdom (2.1%) and Sweden (2.3%). This is consistent with the results of previous studies that reported that, despite of a high dietary intake of saturated animal fats and the highest intake of wine worldwide, France had the second lowest coronary arteries disease mortality rate in 1994. Now, more than 20 years after the publication of these results, several experimental and epidemiological studies have investigated the fascinating association between red wine consumption and cardiovascular mortality and morbidity *(Lippi et al., 2010).*

Red wine contains far more flavonoids (especially anthocyanins and proanthocyanidins) than white wine and thus has higher antioxidant activity: it inhibits platelet aggregation and relaxes blood vessels. The data suggest that a moderate intake of red wine (1-2 drinks a day) may have potential benefits for alcohol-independent health, and this requires clinical studies and epidemiological investigations (*Cao & Prior, 2000*). Scientific research has shown that the molecules present in grapes and wine alter cellular metabolism and signaling, which is mechanically identified by reducing arterial disease. Discovering the nutritional properties of wine is a difficult task that requires the biological actions and bioavailability of> 200 individual phenolic compounds to be documented and interpreted within social factors that stratify wine consumption and the numerous effects of alcohol. The health benefits of wine refer to the prevention of diseases that are slowly developing and although the benefits of polyphenols from fruits and vegetables are increasingly accepted, the consensus on wine develops slower (*German & Walzem, 2000*).

Antioxidant effects of moderate wine consumption may be one of the factors responsible for the "French Paradox", proving that red wine increases plasma antioxidant capacity, suppresses reactive oxygen species generation, increases oxygen radicals uptake and decreases DNA oxidative damage. Also, flavonoids from wine protect against LDL oxidation and procyanidins are particularly active in preventing lipid oxidation of foods in the digestive tract, indicating that consumption of red wine at meals provides the greatest

cardiovascular protection. Also, the positive effects of wine consumption on the body's immune function require more than two weeks of daily consumption of at least two glasses of wine (300 ml) for men (less for women).

An epidemiological study conducted on several European sites found that moderate daily consumption of wine was associated with lower levels of systemic inflammatory markers compared to individuals who do not use alcohol or, on the contrary, are dependent on alcohol. Moderate wine consumption is also associated with a low risk of cardiovascular disease (by increasing HDL cholesterol levels, inhibiting platelet aggregation), type 2 diabetes and many cancers. The polyphenols present in wine independently provide antioxidant protection and also act through a variety of mechanisms to prevent and attenuate inflammatory responses, thus serving as cardio protective, neuroprotective and chemo preventive agents *(Guilford & Pezzuto, 2011)*. The beneficial effect of moderate wine consumption on all-cause mortality risk was observed in people with high blood pressure. These findings may have important implications for middle-aged and elderly hypertensive patients, who are already consuming moderate wine because it may lower the risk of death of these patients, which has not improved for recent antihypertensive drugs *(Renaud et al., 2004).*

The Department of Health and Human Services *Dietary Guidelines for Americans* defines moderate alcohol use as having no more than one drink per day for women and no more than two drinks per day for men. When analyzing the benefits of moderate alcohol use on longevity, it is important to consider the effects of other factors on health: diet, education and income level, health habits (smoking and exercise), social involvement and age because many of the studies described above have found that although wine consumers often have lower mortality rates than non-drinkers, their lifestyle is also healthier overall, so it is hard to say which are the factors that have the great beneficial effect and so we can say that the healthful effects of wine may be enhanced by a healthy diet. In Denmark, for example, wine consumers tend to consume a healthy Mediterranean-style diet (rich in fresh fruits and vegetables, fish and olive oil, and poor in meat and dairy products) and have a higher socio-economic status. Moreover, studies have found an association between moderate alcohol consumption and lower levels of depression, anxiety and perceived stress (*Rudis, 2010*).

As mentioned, there appear to be more health benefits associated with red wine than white, and certain polyphenols, such as resveratrol, offer an abundance of health benefits, but resveratrol itself has low bioavailability, indicating that resveratrol metabolites are the real key players. However, most medical professionals, as well as the American Heart Association, agree that alcohol addicts or non-alcoholic drinkers should not be encouraged to drink wine for health reasons. Wine consumption should not replace a healthy lifestyle, but light to moderate wine consumers, without any medical complications, can be sure that their wine consumption is a healthy habit *(Guilford & Pezzuto, 2011)*.

Several studies examining the association between intake of different types of alcoholic drinks such as beer, spirit and wine and all-cause mortality showed that wine intake was the most beneficial. To confirm this hypothesis, a study compared the acute protective effects of red wine, beer and vodka against the oxidative stress induced by hyperoxia and the associated increase in arterial rigidity. Results showed that all types of alcoholic beverages prevented the increased of arterial rigidity induced by hyperoxemia, but only the red wine diminished the oxidative stress after hyperoxemia *(Krnic et al., 2011*). Another study shows that the frequency of wine consumption, but not of other alcoholic beverages (such as beer or liquor), was independently linked to lower mortality risk, especially for coronary heart disease and respiratory deaths. This protection may be associated with health patterns among wine consumers (such as diet, physical activity, etc.) and / or may be a specific benefit from wine (*Klatsky et al., 2003*). Also, another study showed that both clinical and experimental evidences suggest that red wine does indeed offer greater health protection than other alcoholic beverages, protection attributed to antioxidant polyphenolic compounds derived from grapes and which are found especially in red wine *(Burns et al., 2001).*

Health risks of high wine consumption

Although the positive effects of wine on health are many, three or more drinks a day can increase the risk of neurodegeneration, depressive disorders, obesity, bone loss, hypertriglyceridemia, heart disease, high blood pressure, stroke, breast cancer, suicide and injury *(Guilford & Pezzuto, 2011)*. High alcohol consumption can lead to lipid peroxidation, alteration of the level of metals in the body, contributing to the production of reactive oxygen species. In tissues, the generation of exacerbated ROS triggers an inflammatory cascade response, which affects homeostasis and culminates in tissue injury and disease establishment. In this context, alcohol has negative effects, causing severe alcohol-related liver disease *(Markoski et al., 2016).* Also, the consumption of wine in any quantity is contraindicated in pregnant women, children and patients with liver disease and in combination with certain medicines *(Guilford & Pezzuto, 2011)*.

Drinking behavior of young adults

Wine is said to be one of the most consumed alcoholic beverages among young adults, so few studies analyzed the relationship between different types of alcohol during adolescent and body weight. Some found a direct association between high alcohol consumption and high self-reported weight gain, while

others found that adolescents with high alcohol intake were at smaller risk to become obese in adulthood than adolescents with low intake of alcohol *(Poudel et al., 2019).*

Most young Chinese adults lack even the most basic knowledge about wine. In general, they drink rare wine. Most Chinese young adults prefer red wine (92%), and most of them (60%) like to drink wine at home, followed by hotels (21%) and restaurants (15%). Also, more than half of young Chinese adults drink wine for social communication, while 27% of them drink for health reasons, existing strong correlations between consumers' knowledge of wine and the frequency and likelihood of future wine consumption (*Li et al., 2011*). In general, the drinking behavior of young adults in any country or culture is related to the drinking behavior of the entire population. However, a study of young adults in Portugal, aged 18-26, found that participants generally did not consume much wine. Young adults said they consume wine for alcohol content, on special occasions and parties with friends where the main motivation is disinhibition and facilitating socialization and fun. Regarding the reason for choosing the wine, the price is the main attribute, which is considered to have a direct connection with the quality. The taste of wine is mentioned as the key attribute that differentiates between consumers and non-consumers, as it is also identified as the main reason for the non-consumption by the participants (*Silva et al., 2014*).

Psychological, behavioral, cultural and educational issues about wine consumption

The benefits of moderate wine consumption over cognitive functioning have been presented by international scientific literature through epidemiological results, suggesting that wine is a protective factor of brain functioning and may possibly reduce the risk of dementia. A large part of the literature explains that the identification of these benefits is not highlighted even when comparing moderate consumption with abstinence. Therefore, cognitive benefits and beneficial effects on brain health or reducing the risk of dementia are not generally supported.

Acute alcohol consumption leads to disinhibition, emotional disturbance, social problems, impaired psycho-motor activity. The consumption has more exaggerated effects when it comes to teenagers where quantity and quality of wine consumption is not well-evaluated. That is why parental control, respecting religious believes and creating healthy consumption behaviors are important at this age.

The family plays an important role in creating the wine consumption behavior. In some countries, drinking red wine at lunch or dinner is a non-infringing custom. In other communities, the restrictions imposed by religion are strictly respected, with the family playing a major role in maintaining these customs.

From a psychological point of view, the consumption of alcohol in the family has an educational role: if we see that one parent is upset or depressed and consumes alcohol, or another parent is happy and celebrates by consuming alcohol, this behavior will also be assimilated by children. Wine consumption behavior is taught in the family, behaviorists explain in this way why alcoholism is transmitted from parents to children.

Ethical concerns about wine consumption researches

Observational data around benefits of moderate alcohol consumption and heart health suggests that a light to moderate intake, in regular amounts, appears to be healthy. But results determine confusing conclusions when mathematical models have been applied to determine causation

Numerous studies have identified a correlation between moderate wine consumption (especially red) and better cardiovascular health. However, these studies mentioned the link and not the causality between moderate wine consumption and cardiovascular health. Many of them even mention comparative results between the abstinent population and the moderate consumers, concluding that, from a medical point of view, the benefits of wine consumption cannot be strictly assessed, and its consumption cannot be recommended in order to prevent cardiovascular diseases.

The consensus of epidemiologists, social scientists, and alcohol policy experts who found that moderate alcohol consumption was cardioprotective was not anymore sustained by scientific researches in the last 10 years. The studies lead for more than 3 decades were accused to be sponsored by alcohol industry in the United States, for example "In July 2017, the *New York Times* reported that the National Institute on Alcohol Abuse and Alcoholism (NIAAA) would be funding a $100 million randomized controlled trial (RCT) to examine an issue that had been the subject of scientific and public health controversy for four decades: whether moderate alcohol consumption was protective against cardiovascular disease" (*Oppenheimer et al., 2019*).

Many studies proved that moderate wine drinkers are healthier than heavy drinkers, but some epidemiologists sustained that no consistent results were proved when it comes to compare with abstinent. The inclusion of abstainers

in studies targeting the benefits of moderate alcohol consumption should also consider the fact that many of the abstinent subjects have proved to be chronic carriers, so poor health prohibited them from alcohol consumption.

So, in the last years, the skepticism about the protective role of wine has grown more and more. That is why, as a public health concern, advising wine in order to protect from cardiovascular disease is not accepted anymore and it is seen as an unethical behavior among medical doctors.

Conclusions

Despite the doubts, there is a reasonable unanimity regarding the beneficial effects of moderate wine consumption in cardiovascular disease, diabetes, osteoporosis, perhaps neurological diseases and longevity (*Artero et al., 2015*). Studies in humans have shown that phenolic compounds can have beneficial effects on health, due to their anti-inflammatory and antioxidant properties and their role in tissue repair processes. Such mechanisms help the organic systems to ensure the assistance of cellular and tissue functions *(Markoski et al., 2016)*. The excellent health associated with the Mediterranean diet, which combines moderate wine intake with a diet rich in fruits, vegetables, and whole grains, suggests that wine polyphenols have synergistic effects with compounds found in other types of foods *(Guilford & Pezzuto, 2011)*. However, despite the protective effects of these phenolic constituents, the amount of wine consumed deserves attention, as excessive chronic intake can lead to exacerbated response, oxidative stress, endothelial dysfunction and cardiovascular disease *(Markoski et al., 2016)*.

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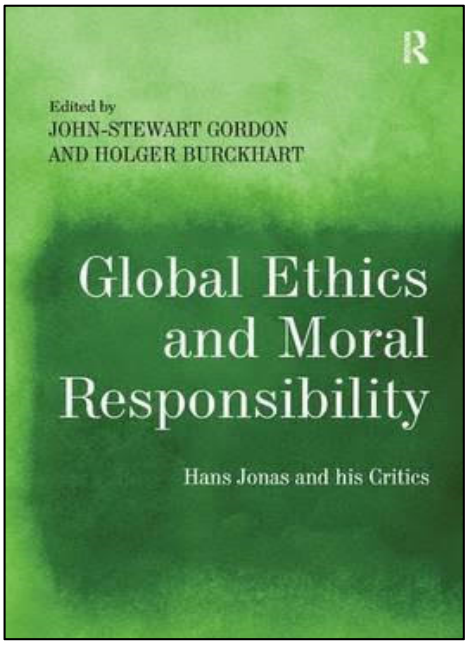
*II. BOOK REVIEWS * RECENZII*

STUDIA UBB BIOETHICA, LXIV, 1-2, 2019 (p. 93-97)
(RECOMMENDED CITATION)

Book Review

John-Stewart Gordon and Holger Burckhart (editors), *Global Ethics and Moral Responsibility. Hans Jonas and his Critics*, Burckhart, Ashgate, United Kingdom, 2014



The volume *Global Ethics and Moral responsibility* includes eleven articles – some already published as independent papers. The opening essay belongs to Hans Jonas to whom this anthology is dedicated. As the editors' intent is to devote the influence of the German-Jewish philosopher's work on the debates between 1980 and 1990 regarding the responsibility in the context of the risk societies. The volume has four chapters, emphasizing a different dimension of the Hans Jonas' thinking – starting with his own philosophy, next chapters propose an applied approach on Jonas' work by debating topics like: the connection between the human nature and the imperative of responsibility; ethics and natural philosophy; the ethics of technology and moral responsibility. At a first glance upon this anthology, it will bring into our attention the plurality of the applied approaches on the Hans Jonas's philosophy. Therefore, the following paragraphs will give an insight about the focus of each paper in the present volume.

We still have to mention the most important work of the thinker, *Das Prinzip Verantwortung – Prinzip einer Ehik fur eine technologische Zivilisation*. Its impact is due to taking into discussion the dangers of the rapid progress of the technology with possible negative consequences on the humanity and nature, aspects that represent a particular importance for the actual debates. Jonas focused on the ethical issues brought by the rapid progress of technology through the cumulative aspects of factors such as: global exploitation of natural resources, deforestation, the use of nuclear energy and the possibility of accidents, energy consumption, global warming, biotechnologies, the explosion and population aging, the decline of biodiversity. All these aspects, in their beginnings, seemed to have insignificant negative effects. However, when the consequences become significant, redeeming the situation involves signified costs, if this is still possible.

The first section of the volume focuses on the philosopher's fundamental concerns: ethical aspects of a future full of dangers. The ethical principle and possible dangers are presented in the opening article of Hans Jonas "*Responsability Today: The Ethics of an Endangered Future"* (1979). The author's approach on this problem emphasizes not only the human's biological preservation who is ready to sacrifice the entire nature for his own supposed needs, but also the idea of maintaining the dignity of the human being. Caring for nature is a part of the humanistic duty. However, due to the technological progress, the present projects us in an apocalyptic context in which both nature and humankind must be protected by man. The management of this kind of context may come with one of the two political ideologies existent at Jonas' times. Living in an apocalyptic situation that create the context for deprivation of freedom and control over nature and man, leading to a superimposition of third degree of limiting powers: the Baconian ideal of power over nature through knowledge that subjugates man, instead of giving the hope of liberation. This perspective concerns the political imposition of social discipline, as in the case of Marxist socialism with the equal distribution of goods, rather than their concentration in the hands of a few. For a release from this destructive tension created, Hans Jonas proposes a principle contrary to the Cartesian doubt for the decision-making process: taking every possibility as a certainty for future decisions. It is man's duty to exist and there is no right to suicide for anyone. Because of this reason, some possible experiments through technology are forbidden: "Never must the existence or the essence of man as a whole be made a stake in the hazards of action" (p. 19). Decisions must be made by taking into account their possible consequences. Or, the existence in the future of human beings, who depend on procreation, impose the specific duties on today's people. The individual's interests cannot endanger the future existence of the others. The chapter is continued by the article – "*Moral Responsibility for the preservation of Humankind"* by Walter A. Weisskopf, an exegetical work on Hans Jonas' thinking,

explaining and analyzing the ideas found in the first article of the volume. The first section is closed by the Holer Burkhart's paper "*Ethics of responsibility: Discourse-ethical perspective of the Justification Problem"*. Here is explained the potential of Hans Jonas' vision in providing an ethical theory valid for the actual context, but whose applicability, according to the author's considerations, is limited to the ontological-metaphysical perspective on the responsibility. However, it is noted that the philosopher's theory provides us an ethic of universal co-responsibility at the dialogical and discursive level, "We are constantly co-responsible for this dimension of the current and future biological, socio-ecological and economic environment." (p. 50)

The second chapter is closer to the actual bioethical issues, the authors giving an applicative character to the naturalist thinking of Hans Jonas. Therefore, in Lawrence Vogel's article "*Is Ageing a Gift? Bioconservatorism and the Ethics of Gratitude*" it addresses the ethical issues of the posthumanist era, when the biotechnologies allow us to transcend the human boundaries: aging or mortality. The author starts from Hans Jonas' perspective on the human being as a psychosomatic whole. Thus, death is a blessing both as a common good and on the individual level. On the other hand, the responsibility towards future generations also takes into account the mortal character of the human being: "for the dying of the old makes room for the young" (p 65). Nathalie Frogneux in "*Some Paradoxes Linked to Risk Moderation"*, the second article of the section, analyzes Jonas' philosophical speech by highlighting the paradoxes of his philosophy in relation to the actual circumstances. The aim of his speech about the small biotechnical catastrophes was that, by observing and becoming aware about his impact on the ecosystem's stability, the man can change his attitude. Human experimentation is one of the aspects in which the principle of precaution and responsibility regarding the next generations can be engaged in developing an answer to the question: "Can certain individuals be sacrificed in the name of a common good?" (p. 85). In this context, the humanity is not in a competitive relationship with the future generations, but it forms a continuum in which those generations are partially contemporary. Thus, the perspective proposed by Hans Jonas has a role, fully assumed by the thinker himself, of warning and motivating for the action. The section ends with an article of the editors Holger Burckhart and John-Stewart Gordon, *"Inclusion – a Moral Imperative, but Also Socially Desired? An Essay in the Ethics of Responsibility" where are mentioned some* moments in the evolution of the philosophical discourse that bring rationality as justification for exclusion. Therefore, it is highlighted that the persons with mental disorders are not referred as subjects in the ethical debate, but as "objects" or as "arguments". The authors evoke, on this topic, the Jonas's conception of responsibility, arguing the inclusion of the persons with mental disorders as passive participants in the ethical speech.

The third section of the volume, unlike the others, has only one article *"God in the World of Man: Hans Jonas' Philosophy of Religion"* signed by Michael Bongardt. The author presents the philosopher's report to some religious and philosophical topics, assuming the premise that: "He questioned religious texts according to their philosophical content, but also examined philosophical texts in terms of their hidden metaphysical premises and allusions." (p. 105) In order to argue his position regarding the apocalyptic possibilities of human actions, Jonas "regarded a religion committed to life as a welcome ally." (p. 123)

The article of Micha H. Werner *"What is Natural about Natural Functioning? Examining an Indirect Argument in Favor of Teleological Naturalism"* opens the last chapter by taking in debate the (meta-) ethical vision of Hans Jonas called *teleological naturalism.* This approach can be applied even in the construction of a philosophical interpretation of the medical practice. "After all, Jonas suggests that the 'living human organism' itself has *intrinsic goals* and the physician have the *duty* to help the organism in attaining these goals" (p. 133). These are not given instantly, but the goals are constituted by the way of seeing nature and individuals as biological organisms, through a deliberative process. In consequence they could not be the independent basis of values or normativity. In *"Ethics for the Technosciencific Age: On Hans Jonas'Argumentation and His Public Philsophy Beyond Disciplinary Boundaries"*, Jan C Schmidt talks about Jonas' interest not only in creating a pure academically philosophical speech, but taking serious the technological reality and engaging his philosophy in shaping the perception of this problem and in the methods of solving it: "Ethics serves to improve praxis; it is praxis in the original sense" (p. 161). The following article, *"Ethics and Responsibility in a Technological Age"*, belongs to David J. Levy who highlights the reference work of Hans Jonas – *The Imperative of Responsability: In search of an Ethics for the Technological Age (1984* – describing it as being not just "profoundly moral in seeking to respond, rightly, to the troubles of his age, but also that it integrates the diversity of his concerns in a single, unified philosophical project that is both inclusive and coherent" (p. 172). The final work of this chapter and, in the same time, of the volume, *"Refined Marxism and Moral Enhancement"*, belongs to John-Stewart Gordon. The publisher present the philosopher's non-utopian perspective on the Marxism, "the real executor of Bacon's ideal" (p. 191), as the 'preventer of the disasters' where the goal is not anymore an abundant way of living, in accord with the personal needs, in a communist classless society. From this perspective, the goal is, therefore, found in "restraining its exploitative and reckless use of modern technology regarding nature; 'for one can live without the supreme good, but not with the supreme evil' (Jonas 1976, 92)." (p. 187). Marxism, in Jonas' reinterpretation, proves to have higher potential than Capitalism in an attempt to prevent a disaster. It is

about a global power that redistributes the resources, imposing certain austerity measures and diminishing exploitation, prudent technological development and reduction of use and development of those potentially dangerous technologies. Despite all of the mentioned methods, the one that could really prevent the disaster is the moral enhancement of the mankind. For attaining this objective, both biomedical and traditional methods could be used. Even if Jonas is against the alteration of the human nature, he admits that the imminence of global destruction is due to its shortcomings. In his view, this intervention would be against God, nature itself and it would undermine human dignity and rights. Nevertheless, the editor believes that Jonas would accept the use of the biotechnology "to calm down aggressive human nature once there was a safe and successful way of achieving the goal(s) of moral enhancement" (p. 206).

Hans Jonas' ethical approach established the principle of responsibility and of prudence, taking into account the care for future generation and respect for the human essence, as well as for the nature, to which human existence is dependent. Therefore, the thinker is concerned with both ecological aspects and the use of biomedical technologies. Beyond the ontological-metaphysical understanding, rejected by many of his exegetes, assuming the co-responsibility attitude can contribute to a significant improvement of the debates and speeches on (bio)ethical topics. Or, this is precisely one of the aspects the *Global Ethics and Moral Responsibility* volume manages to bring to attention: the applied approach on Jonas's ethical perspective gets a better understanding on the impact of his work in the last decade's debates on the ethical aspects involved by the responsibility of living in a risk society.

ANDREEA-IULIA SOMEŞAN

INSTRUCTIONS TO AUTHORS

Articles
The articles submitted for publication normally range between 6 000 to 10 000 Characters.

Title (maximum 80 characters; all caps; bold)

The texts will be accompanied by:
- an abstract, with a maximum of 250 characters;
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