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RABAT

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INTRODUCTION TO MEDICAL STUDENTS' ETHICAL ISSUES : A NARRATIVE REVIEW

THESIS

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Doctor of Medicine

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DEDICATIONS

To anyone near and far who helped shape the one
I am today.

To my beloved whose prayers and faith embraced
me along this journey.

To the medical student I was,
To the wisdom seeker I will remain to be,
To the medical students I would be grateful to mentor one day,

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PREFACE

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CHAPTER ONE: INTRODUCTION

Background

Most of the contemporary medical ethics curricula tend to overemphasize issues related to research, life-sustaining treatments, euthanasia, procreational decisions; which are within practitioners' area of concern, to the detriment of ethical dilemmas that face medical students during their training and are inherent to their unique position in the clinical setting[1–3]. Important as the former matters are, they conversely transcend the trainees' decision-making area and do not pursue their ongoing moral development[2]. Admittedly, medical schools ought to arm students with the theoretical fundamentals and competences imperative to achieve professional standards of competent physicians, but their educational programs should be crafted with an eye on the learners' primary relevant issues[1].

When novice medical trainees enter clinical settings, they find themselves in a perplexing position where they have to acquire medical knowledge, strengthen clinical skills, adhere to the hierarchy of healthcare teams, interact with patients and care for them, and get positive evaluations[1,4,5]. Balancing all these competing objectives, while trying to preserve individual integrity, is as source of ethical quandaries[69]. Remarkably and despite the imperative need to address the aforementioned issues, a code of silence has prevailed among medical students, encouraged by a lack of interest amid faculty members[2]. It seems apparent that both professors and students are keen to discuss patient problems, healthcare innovations and milestones, yet they are loath to open up discussions pointing out deficiencies in training programs and suggesting proper solutions[2].

Auspiciously, in recent years, educators have started to shed lights on these students' specific dilemmas to better understand their roots and implications. Authors from USA[1,6–9] ,Canada[10], UK[11], Iran[3], and Israël occupation entity[12] had undertaken web-based and paper surveys, called trainees for interviews, held focus groups, revised clerkship logbooks and analyzed students' dissertations. Their studies' findings provided a starting point in defining and framing the conflicting situations that clinical apprentices do commonly face in the wards[2]. The courage of medical trainees who unveiled what usually remains silent hardship would be best acknowledged if these issues are finally well-addressed by educators[2]. Further, by opening this discourse, educators would recall the former version of themselves, should they have

overlooked their own training struggles and would be willing to engage in movement toward reform[2].

As far as the researcher and advisor of the present thesis are aware, there is no review that summarize the findings of qualitative and quantitative studies addressing the ethical dilemmas specific to medical students. When available, such reviews would help to guide researchers who intend to investigate on this matter in a given setting.

In an endeavor to discern this subject, the present thesis intends to explore and have a closer acquaintance, within the lights of the literature, of the foremost ethical struggles that medical students encounter, with the parallel objective to introduce briefly some basic concepts related to ethics and medical education.

Section1: Initiation to ethical fundamentals

1/About Ethics:

The World Medical Association defines medical ethics as *"the branch of ethics that deals with moral issues in medical practice*[13]." It is worth highlighting that there is a debate on the nuance between morality and ethics[14]. it is claimed that ethics – which is also referred to as professional medical ethics – pertain to the regulatory body that reflects the norms of behavior of the profession whereas morality; or philosophical ethics, is to be apprehended as a norm-giving framework above all and not profession-dependent[15,16].

The first code of ethics to be appeared was written by Sun Szu-Miao in China back in the 7th century CE[17]. In the Occident, Thomas Percival was a pioneer in this field and released his work in 1803, which constituted the foundation of the primary code of medical ethics, published by the American Medical Association (AMA) in 1847[17]. In the second half of the 20th century, the socio-economic and political transformations along with the biomedical revolution have metamorphosed the modern healthcare practice[18,19]. Therefore, the conventional medical ethics were more questioned than ever before.

In 1979, Beauchamp et Childress released the first edition of their book ***"Principles of biomedical ethics"*** where they elucidate the "4 principles approach" which has become the common reference for medical practitioners. Those 4 principles are as follows:

1/ Respect for autonomy:

Each patient is free to decide whether to accept or decline any medical intervention[20]. This "patient's right" sustain the core of the concept of informed consent[20]. It has to be mentioned that all theories that underlie this principle call for two requirements: liberty and agency[21]. Liberty is defined as "independence from controlling influences" and agency as "capacity for intentional action"[21].

2/ Non-maleficence:

The obligation of non-maleficence outweigh that of beneficence as the classical aphorism says "Primum non nocere: Above all [or first], do no harm"[21]. It compels physicians to

deliberately avoid causing harm to patients[21]. Medical practice underlies two varieties of "harm". It could either relate to the collateral effects that could appear unintentionally from the right treatments or to the injurious consequences of a practitioner's negligence[22].

3/ Beneficence:

Physicians do not only pledge to honor the autonomy of patients and avoid them harm, they also have to act in their best interests[21]. Yet, an important question arises, and with it emerges a significant part of ethical dilemmas: who decides what is the best for a patient and according to what criterias[20]?

Pellegrino and Thomasma introduced a novel model of beneficence where they had integrated some autonomy's concepts[23]. They proclaimed that the principle of respect for patient's autonomy is inseparable from that of beneficence. The latter does not necessarily supersede the former nor does autonomy outweigh the other principles. Contemporary medical practice encompasses instances of patient choice along with junctures of required paternalism[18]. Thus beneficence is a bidirectional principle[24].

4/ Justice:

Justice is defined as "fair, equitable, appropriate treatment in light of what is due or owed to persons"[21]. This principle subsumes two elements: equitability and distributive justice. The former requires that patients with alike health conditions ought to be taken care of equally, irrespective of nonmedical considerations such us economic or social status[20]. In respect of the latter, it asserts that medical care providers have a moral duty to distribute available resources justly considering the inevitable reality of the dearth thereof [20].

In reference to the principlism perspective, an ethical dilemma is thus defined as a disagreement among the four principles[20]. When they are consistent, the path to follow is plain and there is no ethical matter to be addressed[20]. Yet, many ethicists contend that the principlism approach restrains the moral vision and do support other perspectives that grant a more comprehensive and realistic view on ethical issues, inter alia, care-based ethics, feminist ethics, and narrative ethics[20].

2/About Ethical theories:

It seems reasonable to proclaim that a good comprehension of the ethical debates' roots requires first, an overview on the leading theories of ethical reflection.

- **Utilitarian theory:**

It is founded on the concept of utility that is welfare[21]. Utilitarianism is the epitome of consequentialism that encompasses all theories that determine the appropriateness of an action in reference to its consequences[21]. Hence, the upholders of this approach consider an act ethical if it generates the foremost outcome[21]. Yet they differ from one another on which values to be optimized[21]. On the face of things, it may appear simple to limit all the moral aspects of an action to its consequences. Yet, classic utilitarianism is founded on intricate and distinct concepts about the righteousness of a given act[25]:

- The concept of actual consequentialism: the righteousness of an act only hinges on the present consequences (versus potential or forthcoming consequences).
- The concept of direct consequentialism: the righteousness of an act only hinges on the straight consequences of the act (irrespective of the agent's motivation or other factors).
- The concept of evaluative consequentialism: the righteousness of an act only hinges on the value associated with its consequences.
- The concept of hedonism: the value of the consequences relies solely on pleasures and pains thereof without considering other gains such us liberty or knowledge.
- The concept of maximizing consequentialism: the righteousness of an act only hinges on which consequences are supreme (not only acceptable).
- The concept of aggregative consequentialism: the supreme consequences are defined by a function of the values of parts of these consequences. (in lieu of the rankings of the ensembles of consequences).
- The concept of total consequentialism: the righteousness of an act only hinges on the total gain in the consequences (rather than the mean gain per individual).
- The concept of universal consequentialism: the righteousness of an act only hinges on the consequences for all individuals (in lieu of a specific person or group).

- The concept of equal consideration: the gains to one individual count inasmuch as comparable gains to another one.
- The concept of agent-neutrality: consequences are not preferred over others in reference to the agent's view.

These concepts are all endorsed by classic utilitarians but other moral theorists could admit some without the others[25].

- **Deontology or duty-based theory:**

It is also called Kantian approach as its fundamentals are pervaded by Immanuel Kant's philosophy[21]. Kant advocates that humans ought to act morally, not merely do they have the freedom to behave so[26]. He proclaims that morality proceeds from rationality as the reason is inherent in human beings[21]. Two major principles constitute the core of this theory. The universality of moral rules – known as the categorical imperative – and the respect for others.

Kant defines the former concept as "I ought never to act except in such a way that I can also will that my maxim should become a universal law"[27]. It means that any responsibility, that one would consider a moral responsibility, would concern oneself insofar as it concerns anyone else[28]. The latter concept is described as "so act that you use humanity, whether in your own person or in the person of any other, always the same time as an end, never merely as means" [28]. This implies that every person shall be considered as an end in herself or himself and never as solely an intermediary to others' interest[21]. Accordingly, it is inadequate to favor the interest of one person over that of another[20]. In essence, Kantians assesses the appropriateness of individuals' actions on accomplishing their moral duties to others. If so, they are considered to act ethically[20].

- **Virtue theory:**

Aristotle defines a virtue as "a habitual disposition to act well"[29]. It is a trait of character, revealed regularly, that it is good for an individual to endorse[30].His philosophy portrays a virtuous person as a person who have the right motive to do the right action which implies that a right act is not systematically virtuous[31]. It emphasizes on the motivations and character traits of moral agents that allow them to behave morally.

Virtue proponents proclaim that theories founded on the obligation concept are ineffectual to yield decent behavior since formal regulations could never substitute virtuous judgments[32,33]. Hence, it would be more reasonable to emphasize on fostering laudable character traits in humans in preference to rely on their compliance with the rules.

Taylor in his introductory chapter argues that it would appear to be more constructive to consider all ethical theories inasmuch as they seem to be complementing each other[20]. Physicians have a duty to act morally as virtuous humans as well as to what professional standards impose[20].

- If a person missed the virtues, he or she could behave ethically, but his or her motives to do so would be merely for reasons of self-preservation, and thus under challenging conditions, this person could prefer self-interest above ethics.[20]

- If one concentrated on nurturing virtues, irrespective of obligations and the repercussions of oneself actions, one might build an illusory confidence in one's own decency.[20]

Consequently, only by concomitantly relying on one's own virtues, the nature and domain of one's obligations, and the repercussions of one's acts, could a person expect to behave as ethically as possible under any circumstance[20].

3/About the Oath:

An oath is outlined as "a solemn voluntary pledge usually invoking a divine witness. It is the declaration of a principle and a guarantee of the oath taker's trustworthiness, binding the individual personally"[17]. Over the history of medicine, different oaths appeared, inter alia, the oath of Hippocrates in Greece, the oath of Charaka Samhita in India, and the oath of Asaph in the Middle east[17]. Charaka Samhita is a prestigious ancient medical text in India[34]. The oath mentioned therein is to be taken by medical apprentices at the beginning of their learning journey[34]. About the oath of Asaph, it was composed by a Jewish physician Asaph Harofe who resided in Middle east back in the 6th century[35]. For the purpose of the present thesis, it will be expatiated solely upon the Hippocratic Oath.

Hippocrates had initiated the discourse on ethical principles in response to the lack of formal regulations and professional standards that ought to guide medical practice and reprimand unethical behavior among Greece physicians[17]. Scribonius Largus, a Roman physician, was the first to refer to the Hippocrates Oath followed by Saint-Jerome who claimed that Hippocrates impelled his apprentices to take an oath prior to practice[24].

Hippocrates Oath is a 250 words text comprised of 4 sections[24]:

-the preface in which the oath performer invokes Gods of healing[24].

-the commitment of the oath performer to the medical corps and to the community with regard to the communication and diffusion of medical knowledge[24].

-the third paragraph is deemed to be the cornerstone of the oath and the soul of medical ethics: It defends the precepts of beneficence, non-maleficence, confidentiality, regard for human life, professionalism, and proscription of abusive sexual behavior. These ethical precepts give an insight on the moral principles of medicine that prevailed in that early historical epoch[24].

-the epilogue where it is presented the recompenses for complying with the Oath values and the penalties if they were ignored[36].

The Wittenberg faculty in Germany was the pioneer institution in introducing the Hippocratic Oath in its foundation statutes back in 1508[37]. Later after the French Revolution, laureates of Montpellier University seized the initiative and swore in Latin the Hippocratic Oath in their graduation ceremonies[37]. Thenceforth, medical schools through Europe and the United States of America (USA) have endorsed the practice and started to compel their graduates to take the Oath[37].

Today, nearly all North American[38–40], British[41], and Australasian[42] medical schools, as well as other countries' colleges notably Morocco, continue to require oath taking, usually at graduation. However, few have retained the original Greek Oath. In fact, most medical schools ,even in Greece itself[17], substituted the classic text for more adapted pledges, namely the Declaration of Geneva, the Prayer of Maimonides, the Louis Lasagna text, student-authored oaths, and other modified versions[17,38,43].It is worth to call medical pedagogues attention to reappraise the oath-taking practice so as to preclude its relegation to merely a ritualistic recitation[17,44]. Medical alumni have to learn about the considerable history of the Hippocratic Oath, its essence and the changes it had undergone to respond to the contemporary ethical questions before swearing to adhere to it[45] .According to this, it can be argued that reciting the Oath during the white coat ceremonies – in the beginning of medical training – shall be repudiated since junior students could hardly realize the pledge's magnitude[45]. Besides, the devotion to patient care required in the Hippocratic approach may disagree with the training objectives of medical apprentices[45].

Until today, Hippocrates Oath continues to be a valuable fount of medical ethics[29,46], even though it has been challenged by the political, legal and socio-economic constraints that modern societies have encountered since the mid-1960[17]. According to the British historian of medicine Nutton[37], The flexibility of the Oath enables it to endure the important changes in medical care and ethics. Further, it allows contemporary practitioners to endorse the essence of the Oath, in tandem with the reappraisal of its elements so to answer the submerging ethical questions[47].

The full text of the original Hippocratic Oath, the Declaration of Geneva, the Louis Lasagna text, and the Prayer of Maimonides can be found in the Appendix1.

Section2: Initiation to educational fundamentals

1/About the hidden curriculum:

Medical students encounter and interact daily with a variety of beliefs, attitudes and behaviors in the clinical milieu and outside lecture theatres[48,49]. These non-formal facets of the learning environment play a part in shaping trainees own convictions and behaviors and might deflect the objectives of the formal curriculum and impede students' moral development[50].

Educators subsume all these facets under the concept of "hidden curriculum"[51–53] and claim it to be a key element for a thorough discernment of the educational process[54–56] . In this sense, any endeavor to reform medical education without considering the informal curriculum would appear to be unavailing[57]. Following this perspective, Lempp and Seale carried out semi-structured interviews with medical apprentices from a UK college to articulate their views in respect of their learning journeys, informal curriculum's aspects included. The researchers identified four themes; namely (1) personal encouragement, (2) haphazard teaching, (3) the importance of hierarchy and (4) getting ahead by being competitive[51].

About the first theme, students stated that mentors, who were competent in their specialty, devoted to teaching and good at communication with their patients, colleagues, and trainees played a crucial role in enhancing their motivation[51]. It is worth to note that in another study, the absence of positive role models in the educational environment was proved to be detrimental and could lead to a disinterest among apprentices[58].

In respect of the haphazard teaching in clinical settings, the students reproached the unavailability of teachers and the adventitious adjustments of the lectures' calendar, which were described to be frequent, and increased their absenteeism's rate[51]. Faculty members' business is often due to the multidimensional nature of their roles and the resulting imbalance between clinical, teaching, and academic duties[52].

Exploring the clinical training milieu would not be without referring to the conundrum of hierarchy, which will be unpacked thoroughly in the third chapter of the present thesis. Referring to Lempp and Seale study findings, trainees disclosed several incidents where they were humiliated by their superiors after a substandard physical examination or improper answer.

Coming to the fourth theme, the participants outlined that an ambiance of rivalry prevailed over the cooperation spirit among classmates[51]. Each student strove to attract the head of medical team attention and impress the supervisors in order to surpass other students and pave the way for their personal career[51].

Bigdeli and his team came up with about comparable findings in an Iranian setting, albeit with a different classification and more diverse themes[52]. In their study, medical students mentioned the gap between what is taught in manuals and what is performed by healthcare teams and had concluded that, in clinical settings, educational manuals were worthless. Further, they reported situations where the patients' rights and dignity were violated. Besides, they stated that they were perturbed by supervisors' negative comments about the future of the career and the "named" expectations they needed to exceed to secure an employment.

All these themes, among others, constitute a covert curriculum which some experts proclaim to be more influential than the academic one[48,49]. In fact, it appears worth quoting from Wolf that "medical education is a professional socialization experience that involves not only the acquisition of knowledge and skills but also, and perhaps more important, the acquisition of attitudes, values, and a sense of ethics"[59].

2/About the moral development

The question of the moral development of medical students cannot be approached without defining first the appropriate terminology related to, namely (1) moral sensitivity, (2) moral reasoning, (3) moral commitment, and (4) moral behavior[60]. To act ethically, medical trainees have to:

(1) Identify the ethical dilemma.
(2) Ascertain the conflicting principles beneath it and infer what is right.
(3) Be engaged to do what is right.
(4) Act according to what is right.

Considerable knowledge about moral development of individuals ensues from the studies of Carol Gilligan and Lawrence Kohlberg[5]. The theory of Kohlberg identifies three general stages of moral development viz preconventional, conventional, and postconventional[61,62]. The first stage refers to the child who defines right and wrong based on punishment and cannot extrapolate from situations. In the second stage, adolescents determine the righteousness of an act in reference to social norms and what is accepted by others. Thus, they may accommodate their behaviors only to adhere to the group. Individuals attain the third stage when they start to define their moral precepts irrespective of social norms or authority pressure. Yet Gilligan states that the work of Kohlberg represents a male approach of moral development[63]. According to her studies, females do morally develop through interpersonal relationships based on three different levels. During the first level, persons concentrate on their self-interest. Subsequently, they start to outweigh others' interests. Thereafter, in the third level, they try to find a balance between self and other interests. In fact, Gilligan's approach advocates for a caring moral orientation that emphasize on relationships[63]. Many researchers deem that the two moral perspectives of Gilligan and Kohlberg complement each other[64,65].

When medical students join clinical settings, they are supposed to be in the postconventional stage of moral development[64,66]. However, the ethical challenges of wards may potentially compel them to revert to the conventional moral level[67]. Hence, different tests were used to assess the moral development of medical apprentices, inter alia, the Defining Issues Test (DIT) that relies on participant's answers to a set of supposed dilemmas, and the

test of moral sensitivity based on clinical situations[68]. Benbassat cited in his narrative review 5 cross-sectional and 6 longitudinal studies that could not detect, in reference to the DIT, an increase in moral reasoning among the medical students who participated in the investigations[68]. More, he referred to 3 cross-sectional studies that noticed a decrease in moral sensitivity in senior students subsequent to its improvement over the first years of learning in Canadian and Japanese colleges. These findings drew attention to whether clinical learning retrogrades the moral development, how and to what extent?

Emotional[68] and moral distress[5,69] have been claimed to be key factors in shaping the moral development of medical students. The demanding structure of the formal curriculum and the tension it generates, lead trainees to lose sight of the moral image amidst all the academic challenges they have to face[70,71]. In parallel, students find themselves in an apathetical and inimical clinical milieu where they have to adhere to tacit and pronounced rules while preserving their ethical integrity[5,69].

With an eye toward promoting the moral development of their students, faculty members ought to support the trainees along their process of socialization within wards. This mission would not be easy since each medical trainee could be at a different developmental stage and therefore would cope variously with ethical challenges[5]. Accordingly, some students may pursue their moral development irrespective of all difficulty[5]. Others may acquiesce, with more or less comfort, to the ward culture and stay at the conventional moral level[5].

Section 3: How medical students define ethical dilemmas?

Ethical dilemmas are often defined in literature as situations where moral values require or seem to require that an agent embraces two or more conflicting attitudes, in a way that renders the accomplishment of the demanded actions impossible[21]. Put differently, they are cases when "an agent ought both to do and not do something"[72]. However, it is claimed that such definition encompasses only some ethical problems of medical practice yet not all[73]. In fact, Mayer concluded in her study that general practitioners consider as ethical dilemmas not merely cases of conflicting choices but also situations related to emotion, relationships, oneself's pain and reputation[73]. Thus, the question about what cases medical students view as ethical dilemmas is worth pondering.

In reference to salient literature, medical students endorsed four perspectives to describe ethically problematic situations:

(1) **Emotionally perturbing cases** in which medical trainees feel helpless or speechless, experience pain, guilt or resent[74]. Alas, common ethics literature accord insubstantial interest to emotion[73,74] albeit its importance in ethical education were highlighted[75,76]. Focusing merely on rules and precepts does not capture all the areas of moral life[77].Hence, an orientation towards an ethics of care that takes into account emotions and relationships merits consideration[63,77].

(2) **Cases related to the duty and responsibilities of medical trainees**[8,10,74,78,79]: This category covers situations in which students feel that their capacity or scope of responsibility are exceeded or they are uncertain about the limits of their accountability. Lack of supervision or whether a student could disclose the diagnosis to a patient are examples of these cases.

(3) **Cases that pertain to the legal scope**: medical students label issues of statutory medical practice and legal responsibility of physicians as ethical problems[80]. They concentrate on what it could be done "safely", within the bounds of law, in lieu of what it ought to be done[80].

(4) **Conflicting choices or competing alternatives**: these cases subsume under the common definition of ethical dilemmas.

CHAPTER TWO: METHODS

From March 16, 2020 to June 16, 2020, a narrative review of literature was conducted to identify the ethical dilemmas medical students encounter during their clinical training. To find relevant papers, 3 Databases were searched: MEDLINE (Ovid), EMBASE (Ovid), PsycINFO (Ovid).

1/Definition of a narrative review:

Narrative review or literature review is an unsystematic, non-exhaustive synthesis of formerly published papers[81]. It introduces a broad overview on a problem[82,83] and presents a comprehensive account of the status of scientific knowledge in respect of it[84]. There is no structured methodology for identification of studies and no appraisal of quality of papers included[84]. Thus, the findings of a review of literature are not replicable[84]. Authors of narrative reviews ought to be aware of the bias related to this type of studies[81].

2/Aims of the present narrative review:

- To identify the ethical dilemmas medical students encounter during their clinical training.
- To retrieve unethical situations from the experiences and narratives of medical students.
- To understand the underlying ethical questions behind these dilemmas.
- To ascertain the roots of these ethical dilemmas.
- To extract experts' recommendations, ethical guidelines, and policies.
- To determine how medical students cope with unethical situations.

3/Keywords:

A preliminary research was conducted to identify relevant keywords.

Table 1 : Keywords

Population	Questions of interest
- medical students - medical education	- medical ethics - ethics - code of ethics - ward ethics - moral development - hidden curriculum - ethical dilemma - moral dilemma - ethical issue - informed consent - oath - Hippocratic oath - coping mechanisms

4/Inclusion and exclusion criteria:

The population of interest was limited to undergraduate medical students. Studies which assessed the ethical dilemmas faced by interns or residents were excluded. Likewise, research which defined ethical issues of trainees' nurse were removed. There were no restrictions on the design of studies nor their settings. In respect of the language, studies in Arabic, French and English were eligible.

5/Definitions of the Databases:

5.a- MEDLINE[85]:

It is a bibliographic database related to the U.S National Library of Medicine and encompasses beyond 26 million references of journal papers that approach life sciences issues. Articles are indexed using Medical Subject Headings (MeSH terms).

5.b- EMBASE[86]:

It is a biomedical literature database, developed by Elsevier and includes more than 32 million articles of journals notably MEDLINE titles. Papers are indexed according to Elsevier's Life Science thesaurus Emtree. The database is accessible through several platforms.

5.c- PsycINFO[87]:

It is a database developed by the American Psychological Association (APA) and subsumes beyond 4 million peer-reviewed references related to behavioral and social knowledge.

5.d- Ovid[88]:

It is an online research platform developed by the Wolters Kluwer group. It hosts beyond 100 databases, more than 1400 peer-reviewed journals, and over 6000 books. Its content touches a variety of scientific fields namely healthcare subjects, behavioral and social science, engineering areas, and agriculture disciplines.

6/Search strategies of electronic Databases:

To identify studies, a strategy for MEDLINE (Ovid), EMBASE (Ovid), PsycINFO (Ovid) was developed using relevant subject headings and text words. Titles and Abstracts were screened to determine pertinent papers.

6.a-EMBASE: (EMBASE Classic + EMBASE: 1947 to present)

Table 2 : Search strategy for EMBASE

#	Searches
1	*medical student/
2	*medical ethics/
3	1 and 2
4	(dut* or responsibilit* or role*).ti,ab.
5	1 and 4
6	((ethic* adj5 issue) or (ethic* adj5 dilemma*)).ti,ab.
7	1 and 6
8	"moral development".ti,ab.
9	1 and 8
10	"hidden curricul*".ti,ab.
11	1 and 10
12	(coping and ("ethical dilemma*" or "moral dilemma*")).ti,ab.
13	1 and 12
14	"informed consent".ti,ab.
15	1 and 14
16	"medical student".ti,ab.
17	14 and 16
18	("medical student" and oath).ti.

6.b-MEDLINE: (1947 to present)

Table 3 : Search strategy for MEDLINE

#	Searches
1	*Students, Medical/
2	(coping and ("ethical dilemma*" or "moral dilemma*")).ti,ab.
3	1 and 2
4	*Ethics/ or *"Codes of Ethics"/
5	1 and 4
6	"ward ethics".mp.

6.c-PsycINFO: (1987 to present)

Table 4 : Search strategy for PsycINFO

#	Searches
1	Medical Students/
2	*Medical Students/
3	Ethics/
4	1 and 3
5	"moral development".ti,ab.
6	2 and 5
7	(coping and ("ethical dilemma*" or "moral dilemma*")).ti,ab.
8	2 and 7
9	*Medical Education/
10	7 and 9

7/Other resources:

7.a- Reference lists:

After identification of salient research, their reference lists were reviewed to identify other relevant studies.

7.b- Citation searching:

A search of papers who cited the relevant studies identified was conducted and eligible research were added to the present review.

7.c- Dissertations and Thesis searching:

A search of the DISSERTATIONS AND THESES GLOBAL (ProQuest) Database was undertaken to determine pertinent theses (Doctoral and Maser dissertations).

- ⇨ About ProQuest[89]:

It is a platform associated with the Cambridge Information Group. It provides access to several databases that encompass references of, inter alia, dissertations and thesis, books, newspapers, magazines, and peer-reviewed journals.

- ⇨ About DISSERTATIONS AND THESES GLOBAL Database[90]:

It is a product of the ProQuest interface and incorporates beyond 5 million materials. It is the foremost comprehensive selection of master's theses and doctoral dissertations.

- ⇨ Search strategy:

- April 21, 2020:

TI,AB,SU("medical student*") AND TI,AB,SU ("ethic*").

- May 15, 2020:

TI,AB,SU(Theorie*) AND TI,AB,SU("medic* ethic*").

7.d- Books:

- ⇨ Ward Ethics: Dilemmas for Medical Students and Doctors in Training. Cambridge University Press (2001).

- ⇨ Medical Ethics Manual (World Medical Association): Third Edition 2015.
- ⇨ Mending Bodies, Saving Souls: A history of Hospitals. Oxford University Press (1999).
- ⇨ Principles of Biomedical Ethics. Oxford University Press (Seventh Edition).

8/Competing interests:

The researcher and advisor of the present work declare no competing interest.

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CHAPTER THREE: RESULTS

Section one: with the patient

1/Who are you?

1.a/The ethical dilemma:

To disclose or withhold the status of medical students in front of patients.

1.b/The question of identity:

The first challenge that faces medical students when they enter the clinical environment is defining their identity[91]. Different attitudes, appropriate or not, might be embraced regarding this issue. An account on this conundrum could be derived by first coming to understand the theory of identity development.

Medical education has, for many years, emphasized on how to provide apprentices with the appropriate skills to "do" the physician work yet it left aside the question of how to assist them to "be" physicians[92]. The student-physician transformation is a two-sided accommodative process that encompasses individual and social development[92]. In respect of the former side, it is often referred to the Kegan's model which identifies five stages of identity maturation[93]. For the purpose of the present thesis, three stages will solely be expatiated upon. The second stage defines the novice trainees' partial understanding of their milieu and their position in it whereby they commence to emulate physicians' portrayal[92]. This "acting the role" appears in their conceitedness to wore white coats and stethoscopes and held beepers[92]. Thereafter, in the third stage, they start to integrate the professional values along with the social anticipations and ask for role models assistance and reassurance for performing appropriately[92]. At the fourth stage, they attain and embrace a thorough understanding of "being a physician" and become accustomed to the professional environment and its relationships[92]. Henceforth, they become doctors.

Jarvis-Selinger et al. state that each consecutive educational level get trainees closer to physician identity, nevertheless it is not appropriate to assimilate a given level of studies to a specific stage of the Kegan's model[92]. The reason, they argue, is that each educational level has its inherent identity with its roles and anticipations. In this sense, medical students are, in

parallel, required to embrace the related identity of their educational level along with embodying progressively their ultimate professional "being". Thus, at each training position, they are brusquely enforced to relinquish their prior identity, no matter where they are in the acquiring thereof, and adopt a new one[92]. Clearly, the students' quest of being a doctor is a serial deconstruction-construction process of identities, each with its corresponding specific aspects, including rights and responsibilities, roles and perspectives[92]. The crises that proceed from the brusque discontinuity within each identity transition reflect the confusion of the apprentices about their milieu, their roles within it, and the challenges they meet[94]. Jarvis-Selinger et al. infer that these crises are "normal" and inherent to the development of identity. Correspondingly, they call educators to assist their students in handling these crises so as to avoid any detrimental moral consequences.

Indeed, the inappropriate adaptation to these crises is the prelude to the ethical dilemma discussed in this section[95].

1.c/Attitudes of medical students:

Students' attitudes about disclosing or withholding their educational status were retrieved from the findings of two studies:

- A national survey across 120 medical colleges in USA, conducted in 1984 and published in 1988, with a total number of 1596 participants[96].
- A nationwide multicenter survey across 13 public medical colleges in China, undertook between June 2015 and June 2016 and published in 2018, with a total number of 947 participants[97].

Based on these surveys, 3 varieties of students' attitudes were derived regarding disclosure of their identities to patients:

(1) Introducing oneself as a medical student: 28.6% (Chinese study) versus 66% (American study).

(2) Introducing oneself as a Doctor: 71.4% (Chinese study) versus 6% (American study).

(3) Oscillating between both attitudes: 28% (American study).

It is worth pointing out that based on the present thesis' researcher experience and advisor observations of Moroccan students, a fourth variety of attitude should be added to the above mentioned, which is the non-introducing stance.

1.d/The apprehensions and motives behind entitling the student Doctor:

When considering the literature about the issue of identity disclosure, it has been ascertained that a substantial part of medical students and their supervisors express different motives and apprehensions that may compel them to call students for Doctors in the presence of patients. The salient reasons were gathered conjoined to comments of experts on how to surmount them.

- **Avoid patients' repudiation**[91,95]:

Patients may repudiate the involvement of students in care if their educational status were disclosed. Adversely, such refusal might compromise the learning process of trainees. Patients' repudiation is often attributed to their anxiety and distrust about the quality of medical care provided by apprentices.

☞ Experts' commentary:

Griffin Trotter states that describing the benefits and disadvantages of students' participation in care helps to temper patients' anxiety[95]. Indeed, trainees spend attentively more time with patients than could afford the attending physicians[95]. Thus, they happen to enfold considerable details about patients' medical history[95]. Further, in the presence of students, patients feel free and at ease to share their apprehensions and ask questions[95]. Besides, the easy terminology that apprentices adopt to explain the medical condition to their patients help the latter to better understand[98]. Several studies had shown that patients appreciate the students' participation in care[99–104]. Not merely that, one study asserted that patients were keen to contribute to the training process of prospective physicians[100].

Adversely, if a patient remains insistent, his or her decision ought to be supported. In fact, such case would be a crucial opportunity for medical students to understand and incorporate the ethical importance of honoring patients' preferences, even if it entails to sacrifice or delay the learning opportunity[91]. Admittedly, patients are entitled to know the position of the medical

team members and to retain consent for the care suggested[96] yet this invites a debate about how patients await qualified health care when they refuse to contribute to the imperative process preserving this right, that is training physicians[95]?

- **Prevent patient's discomfort**[95]:

Patients remain optimistic and feel comfortable if they presumed that students who attend them are physicians.

☞ Experts' commentary:

Patient-physician relationship is grounded on confidence, and confidence entails sincerity. Hence, it appears to be antithetical to build trust on mislead and deception[95]. Indeed, medical care could encompass moments of "benign" paternalism[95]. Nevertheless, lying to patients should never be one of these moments[95].

- **Prevent students' and physicians' discomfort**[91,95]:

Supervisors and students feel at ease when patients are misled about the educational status of the trainees. Indeed, the strategy of introducing students as actual physicians helps them escape patients' doubts and apprehensions about the quality of students' medical care.

☞ Experts' commentary[95]:

This assumption follows the previous point about confidence. If upholding trust may cause discomfort or awkwardness to faculty members and trainees, it has to be accepted and handled. In no case patient's rights should be sacrificed for students' or senior's convenience and "ego".

- **Help students perform better[91]:**

It might be presumed that students fulfill their clinical duties better if supervisors called them doctors and patients believed they were so.

☞ Experts' commentary:

Pretending to be physician when one is not, would not be helpful to temper anxiety nor to achieve learning objectives[95]. In contrast, it exacerbates students disquiet about their

incompetence and deficient knowledge and therefore intensifies their moral distress and feeling of guilt[95]. Moreover, it hinders the learning process by depriving them of their educational position[91]. Admittedly, students improve when they are given the latitude to ask questions, reexamine patients and ascertain diagnoses[91]. Thus, designating them as doctors would rise patients' expectations which would exert more pressure on them[91]. Besides, from the patients' position, they would be more tolerant and cooperative if they were informed about student's identity[91].

- **Elude seniors' reprehension**[12,95]:

When faculty members or attending physicians present students as doctors, they generate an ethical dilemma that put trainees in a confusing situation. In response thereto, trainees could either return later to the patient and disclose their educational status and thus expose supervisors' integrity to doubts and make themselves prone to seniors' reprehension and anger. Or, alternatively, they could choose to remain silent and therefore comply with the pretense and deceive of patients' trust.

☞ Experts' commentary:

Medical students describe relationships with supervisors as more difficult and complicated than interactions with patients[1]. This evokes the hierarchy matter that shall be discussed in the second section of this chapter. Besides, introducing students as doctors in order to "legitimize" student-patient relationship undermines the process of socialization of medical trainees in the clinical setting[91]. Hospitals ought to enjoin residents and attending physicians to introduce students as "students" during the first contact with patients in parallel with presenting the other members of the health care team[91]. In doing so, superiors substantiate the trustworthiness of students in patients' sight and approve the importance of their role in medical care[91].

- **Evade responsibility**[96]:

Students might presume that it is the duty of the hospital and supervisors to disclose their educational status to patients.

☞ Experts' commentary:

Lidz and his co-authors describe this attitude as "the floating responsibility"[95]. In fact, they deem the conjecture that patients could distinguish students from physicians or that faculty members had already informed the patient about the educational status of trainees not valid.

- **Presume no harm**[91]:

It might be claimed that introducing students as doctors have no deleterious effects on patients.

☞ Experts' commentary:

Misleading patients about the real identity of trainees is an act of lying that has ethical and legal consequences[91,95]. Indeed, it does not only interrogate the trustworthiness of the students but that of the whole medical team[95]. Besides, it disdains patients' dignity as autonomous persons who merit to know the truth[95]. What would be the answer to a question like "how patients would feel if they learned the truth"? Certainly, they would experience outrage, deception and disloyalty[95]. From the angle of consequentialism, this leads to another question of whether the benefits might compensate patient's deception but based on Kant's ethical approach, this is not tenable.

One the face of things, it appears that patients are the only victims yet it is claimed that students are also subject to harm inasmuch as patients[91]. Pretending that the healthcare team encompasses no trainees underestimate their roles within the wards and illegitimates their involvement in the eye of patients[91]. Further, patients who find out they were misled would likely to refuse the participation of any prospective trainee[91]. In another light, starting ones' professional life with lying and getting used to deceiving patients' confidence is highly to impede the moral development of students and might encourage them to more ethical transgressions[91].

- **Claim no instructions**[96]:

Medical students might be unaware of the ethical obligation to disclose their educational status or might be aware yet ignorant how to introduce themselves to patient.

☞ Experts' commentary:

Medical curricula should address the issue of students' identity before they enter clinical settings and provide them with the guidance on how to approach patients[91]. Within wards, it would be easier to patients to identify trainees if the latter wore name tags and short white coats[91,105]. More, such identification based on appearance would facilitates the first interaction between students and patients. Another prominent point to be highlighted is that it is ethically unacceptable to disclose the students' identity to some patients and withhold it from others based on their educational backgrounds or their "litigiousness"[91]. Each patient, irrespective of any consideration, ought to be informed about the identity of their care givers[96]. Further, it is worth mentioning that hospitals hold legal responsibility to obtain patients' informed consent for the involvement of students in their care at the time of admission[91,96].

- **Other motives**[95]:

Kate Christensen outlined the point that the structure of teaching hospitals relies, in a large part, on the involvement of medical students and physicians in training namely interns and residents. Hence, it cannot be possible to afford care exclusively by certified physicians if all patients decide to refuse the involvement of apprentices.

Further, she conceded that students – including herself when she was one – enjoyed tacitly to be called "doctors". Although it is a premature title, students might argue that they will deserve it in the near future. This recalls again the matter of hierarchy where students yearn for a feeling of power and respect even if it were merely an illusion. Besides, it refers to the second stage of the Kegan's developmental model discussed earlier[92,93].

2/Physical examination:

2.a/The ethical dilemmas:

- To carry out a physical examination on an anesthetized patient without previous consent[106,107].
- To carry out a physical examination on a conscious patient:
  - without asking for consent[107].
  - or after obtaining a "cold consent" [107].
  - or successively by several students[108,109].
  - that the student is not assigned to[109].

2.b/The question of privacy:

Privacy is an emotional realm that humans strive to uphold[110]. An intrusion of this private sphere is frequently imperative to medical care notably during physical examinations[111]. When being subject to this invasion, patients may experience different emotions ,inter alia, uneasiness, anxiety, vulnerability or fear[111,112]. Indeed, the state of being a patient might be irritating to "patients" which is perfectly defensible and comprehensible[113]. Thus carrying out an ethical medical examination entails to honor the privacy and intimacy of patients[111]. It is worth to highlight that considering an examination intimate and another one "less" intimate is ethically questionable since all physical examinations are intimate[114].

There are different elements that may influence the patients' attitude when attending for a physical examination viz culture[115], religion[115], social norms[116] and personality traits. More, the patients' former experiences of comparable medical intercourses particularly if were traumatic[117] would define the degree of their comfort.

What about the privacy of the person who conducts the physical examination? In the limits of this review, data about this question could not be identified. However, it may be ventured that an invasion of the practitioner's own privacy occurs during clinical examinations. The social space reduced between physician and patient in the course of this medical act could generate inconvenience for both of them. To be privy of patients' intimacy – who are humans like oneself – is an emotional experience that is worth investigation and uncovering their

potential consequences on the psychological health of medical practitioners. For medical trainees, the discomfort could be more pronounced due to their novel status in the medical care process and therefore the exploration of this matter would be of a great interest. One crucial advantage of considering this question is to help clinicians and apprentices be aware of their innate psychological responses and therefore contain them appropriately. Awkwardness and anxiety are likely to be infectious[116]. Consequently, as a practitioner, a lack of awareness about oneself own reactions and a dearth of interpersonal competence with patients would adversely distress the latter[116,118] and disrupt the confidence of the former.

2.c/Examination of anesthetized patients without previous consent:

- **Grounds:**

Medical students' temptation to perform physical examination on unconsenting anesthetized patients often occurs in gynecologic, genitourinary or proctology wards where the clinical examination could be described as "delicate"[106,107]. Hence, it might be presumed that patients would be reluctant to give their consent to undergo such examination by an apprentice which would undermine the learning process[107]. Besides, it is claimed that this strategy would help to prevent any physical discomfort to the patients yet at what price[106]?

☞ Experts' commentary:

Indubitably, the first issue that arises from this ethical dilemma is that of informed consent[119]. Without it, any clinical examination performed is assessed as an "assault"[119]. Yet it appears worthy to quote from George J. Agich that the foremost ethical issue that shall draw attention is that of lack of respect[108]. Indeed, physicians ought to have respect for their patients but this ethical obligation should be more emphasized when patients are unconscious[120].

In respect of the issue of informed consent, a question emerges about whether it could be ethically tenable to claim that students' examination of an anesthetized patient subsumes under the general informed consent obtained for the surgery? Wall et Brown deem it is, inasmuch as the trainee are actively integrated within the operating team[121]. Where applicable, the medical student – as well as all the assisting team – have to perform a clinical examination before the surgery in order to be acquainted with the anatomy of the surgical area[121]. In parallel, the

attending surgeon shall explain to the apprentice the patient's disease, the therapeutic objectives and the potential complications[121]. All those measures aim to help the operating staff – including the trainee – to fulfill their duties efficiently and ensure the best care for the patient[121]. Accordingly, it can be stated that the assisting students play an important role within the surgical team and their position shall be acknowledged[121]. Hence, considering their participation in the operating activities as a mere learning curiosity and implementing undue and hindering "bureaucratic"[122] protocols to their training journey should be withstood[121]. Instead, it would be more interesting to call faculty members to promote the students' integration within the different clinical activities and to not downgrade their position to mere observers[121].

In a different light, what would be the ethical perspective if the physical examination was performed by a "non-assistant" student or was not within the scope of the surgery? In the case of a pelvic examination, the Association of Professors of Gynecology and Obstetrics (APGO) renounce the practice in its statement and establish four requirements to perform a genital examination[123](see Appendix2). Besides, it is outlined in literature that women appraise such act as a violation which could engender a posttraumatic stress disorder or lead patients to discredit medical care teams[124,125].

From an educational angle, the teaching mannequins and the non-patient volunteers help acquire the "mechanical" skills whereas the clinical examination of anesthetized patients deprive students of learning the "communication" skills insofar as it deteriorates their moral development[126].

2.d/Examination of conscious patients:

- **Grounds:**

In light of the ethical situations described in literature, medical trainees carry out a physical examination of a conscious patient without asking for his or her consent when supervisors instruct them to perform one in order to evaluate their competence[107] or to recognize an uncommon physical finding[108]. Students asking seniors whether informed consent had been obtained might not always be appreciated and well-received[107]. It could be viewed as an

impudence, a lack of assiduity or an ingratitude to the opportunities provided to them which might undermine their clinical rotations journey or much worse their career[107]. Besides, some supervisors claim that asking benighted patients to consent would be worthless since the latter could not understand and would anyway reply in the affirmative[107].

☞ Experts' commentary:

Preventing discomfort for both practitioners and patients and preserving the dignity thereof are two main conditions of a virtuous and successful physical examination regardless its scope [119]. Patients need to know who would perform the examination and understand its rationale, its steps and any discomfort or pain it might engender[119]. These requirements help to honor the principle of autonomy and informed consent, relieve patients' distress and vulnerability. Further, it does promote the "empowerment"[108] of patients by providing them more control of the medical acts they have to undergo[119]. When supervisors enjoin – or leave by negligence – medical students to undertake a physical examination with a disregard to the ethical guidelines, they engage them in a perspective that relegates rather than enhances the perception of the physician as a compassionate healthcare provider[108]. It is crucial that medical trainees realize how patients experience and perceive the physical examination[127,128] and learn how to create an ethical and comfortable ambience to carry out one without causing patients emotional harm. Further, faculty members have to instill in their apprentices that patients are teachers and not educational materials or opportunities[122]. In the instances when a patient presents a relevant, peculiar or rare physical finding, it is suggested to inform the patient about it and explain to him or her that trainees need to learn to identify it[129]. According to Ben Rich, the majority of patients would give consent if treated with decency[129]. Likewise, Lawrence J. Schneiderman states that, in general, patients appreciate the attention as long as they expect it and a good conversation with them will afford that and protect them from feeling manipulated[129]. Genitourinary and rectal examinations add another dimension to the ethical discussion since they are described and considered in literature as *"delicate", "intimate"* or *"sensitive"* [106,107,116,119]. Therefore, different regulations were set up in order to protect both patients and physicians[130](see Appendix2). Medical trainees ought to be aware of those established by their universities[125]. In tandem with the guidelines, faculty members have an

obligation to enlighten students on the theme of sexuality[131]; the particularities of each gender, the influence of culture, the inadvertent physiological responses that could occur during the examination and how to handle them appropriately[131]. A student who does not have a good "sexuality foundation" might experience distress, discomfort or shame while performing a delicate physical examination and might retain a negative impression. Even worse, if the patient happens to present involuntarily a physiological reaction like an erection, the trainee would not be able to cope with his or her embarrassment nor with that of the patient, and that would cause a painful scar to both of them[131]. Another issue that draw attention regarding delicate examinations is the temptation to desexualize them[119]. When supervisors advice a student to focus on the topography of the examination whether it is the rectum, the urinary or genital tract and to elude the eye-contact with the patient[119,132], they tacitly give the apprentice the impression that something is wrong. Further, similar strategies are extremely detrimental to the patients[132].

3/Performing clinical procedures:

3.a/The ethical dilemmas:

- a medical student who undertakes a medical procedure without supervision[1].
- a supervisor who instructs a medical student to carry out a procedure without supervision[131,133].
- a medical student or a supervisor who did not fulfill all the requirements of an informed consent:
  - did not disclose the level of experience of the trainee[108].
  - did frame the information given to the patient in a way to obtain a positive response[108].
- a supervisor who did not ask the medical student about his or her level of experience about a specific procedure[108].
- a medical student who withheld his or her level of experience to the supervisor about a specific procedure.

3.b/The question of invasiveness and complications:

Prior to discuss the ethical issues related to the performance of a clinical procedure, it appears indispensable to outline first the terminology related to this subject. For diagnostic, therapeutic or prognosis purposes, healthcare providers conduct a wide range of medical actions namely physical examination, non-invasive and invasive procedures. In the remainder of this discourse, it will be concentrated on the latter category. Cousins et al. define an invasive procedure to be any clinical practice that requires specific competence, the use of medical instrument and entry to the human body whether is this through an anatomical orifice, a percutaneous access or a section[134]. Admittedly, invasiveness means risk of complications yet the literature only refers to those caused by a performance of competent physicians and not unskilled ones[108]. The incidence of adverse effects is assumed to be higher when a procedure is undertaken by an inexperienced physician[108]. Further, the temptation to comfort patients by presuming that complications are rather benign is morally not tenable. Pain or discomfort might

be considered negligible from a care provider standpoint yet patients who actually experience those feelings assert them differently[108] .

3.c/Grounds:

The issue of trainees performing medical procedures could be approached by starting to ask the right questions. How a medical student is to acquire the skills needed to carry out a medical procedure?

Gregory L. Larkin quotes that when he was a clerk, a professor instructed him and his colleagues to undertake an intravenous line on each other[133]. When they had experienced what it meant to undergo a procedure, Larkin and the other students realized that patients are neither to be considered practicing opportunities nor training materials. This remind the Kantian approach of ethics that considers every human being as an end in him or herself and compels to treat others the way one would treat oneself since all are humans and all are prospective patients. Hence, a second question rises about when a medical student could perform a medical procedure on a patient?

The propitious development in educational technologies has changed the way that addresses such query since it has provided apprentices the chance to gain proficiency by practicing almost all medical procedures on highly realistic manikins[135]. These simulations would allow competent students to perform rather than "practice" a procedure on a real patient. Yet it would not enable them to carry one out without proper supervision[131]. A successful medical procedure requires the technical competence alongside the communicative skills, which manikins do not provide. While training on a simulated patient, apprentices do neither need to get a "manikin consent" nor do they experience anxiety, doubt or any personal commitment in contrast with what they would feel if they approached a real patient[135]. Further, their educational status does not countenance them to practice independently. Thus, a competent physician needs to assist them throughout the procedure to assure the patient's safety and to provide them an encouraging and favorable educational milieu[131]. Adversely, the dearth of a supervision would imperil both patients' and trainees' interests[131].

From the patients' perspective, this may jeopardize their health condition if a complication happens to occur during the procedure without the presence of an experienced practitioner to handle it[131]. Besides, it might cause emotional distress to them if the trainee could not make them feel at ease[131]. Not to mention that the student could forget to fulfill all the requirements of an informed consent[131]. From the apprentices' side, the absence of a supervisor would increase their anxiety and discomfort and might lead them to feel undue guilt if they failed to carry out the procedure[131]. Moreover, their confidence and self-image would be disfigured in the case they committed a mistake and caused harm to the patient when no senior is around to help[133].

The above discussion elucidates what is ought to be done and why in respect of the ethical issue of medical students performing procedures. In the remainder of this discourse, it will be discerned the reasons why the ethical considerations are disregarded in clinical settings.

3.d/Motives behind unethical clinical procedures:

The ethical quandaries mentioned earlier proceed mainly from a deficiency of consent or supervision.

- **Motives behind a deficient consent:**

It might be claimed that since medical trainees are members of the care team, their involvement fall into the general consent and they do not need to obtain a specific one whenever they intend to perform a medical procedure[96,136]. However, the consent acquired on the admission does not meet all the criteria of an informed consent. Indeed, the lack of essential details related to the students role within the team may influence the patient's decision[136]. Another example of a deficient disclosure is that when the supervisor withholds the level of experience of the trainee and formulates the information so that to obtain the patient's approval[108]. This behavior derives from the failure of seniors to handle the conflict of interest between delivering care and teaching trainees[108].

☞ Experts' commentary:

One of the criteria of an informed consent is the absence of coercion which subsumes all the factors that may impede the patient's autonomy[108]. William Nelson and Paul B. Hofmann assume that the concealment of essential details in order to prevent the patient's refusal is an elusive coercion[108], thus the validity of the consent shall be questionable.

Clearly, faculty members and attending physicians should assist students along the process of getting patients' consent and reassure the latter that they will have a close oversight of the procedure[108]. The issue of informed consent have to be considered as an opportune moment to enhance the moral development of the apprentices rather than an ethical or legal hindrance[136].

- **Motives behind a deficient supervision:**

Why seniors would not assist students when they perform a medical procedure and why would students accept to be unsupervised, is clearly to hinge on a good understanding of the clinical environment. The ethical dilemmas related to the matter of supervision proceed mainly from the problem of hierarchy or that of overworked staff[131,133]. What will an apprentice do when a superior instructs him or her to undertake a procedure independently? The powerless position of students does not allow them to assign the instruction to another member of the healthcare team nor does it grant them the "luxury" to question or refuse the seniors' order without adverse consequences[133]. Therefore, students feel compelled to acquiesce and accept the absence of a supervision as part of the socialization process[133]. Another reason that does not subsume under the issue of hierarchy but is worth noting is that related to vanity. Medical students are keen to prove their "usefulness" and efficiency to the care team and patients[133]. Thus, they may consider the presence of a supervisor as a burden that underestimates them and undermines their professional image[133].

In regards to the exhausting atmosphere of the wards, supervisors may delegate the performance of some medical procedure to the trainees that they assess noninvasive and easy to carry out. Further, they may rely on the rule of "see one, do one, teach one" and expect trainees to perform competently without their presence so that they could fulfill their clinical duties instead of "wasting" time on supervision[131].

☞ Experts' commentary:

One would ask: would a supervisor assign the responsibility to a trainee if the patient were considered a VIP (Very Important Person)? One of the foremost matters that draw attention in these ethical dilemmas is that of how patients are valued[133]. It might be presumed that seniors allow students to perform independently when the economic and social level, the ethnicity, the level of lucidity of the patient are deemed lightweight[133].

In respect of the issue of vanity, Gregory L. Larkin refers to what Samuel Papper asserted that "not to recognize one's limitations is a serious matter, but to recognize them and not to act accordingly is unforgivable testimony to personal vanity. Vanity has no place in medicine"[133]. There is no shame in acknowledging oneself weaknesses and accepting the learner's position[133]. Correspondingly, students ought to learn to outweigh the ethical duties over matters of arrogance, self-image and pride[133].

Related to the pace of work within the wards, it is the results of economic, political considerations, and the policy of hospitals. All these factors do not subsume under the purposes of this dissertation.

Section2: With the seniors

1/ The ethical dilemmas:

- A supervisor who instructs a medical student to write a false note on the medical record of a patient:
  - e.g. omit an overdose adverse event under the cover of allergy[129].
  - e.g. withhold a patient symptom or a physical finding.
- A supervisor who instructs a medical student to write an update note on a medical record without carrying out an appropriate physical examaniation[1].
- A supervisor who instructs a medical student on call to refuse a referred patient without a tenable reason[74].
- A supervisor who distorts information in the presence of a medical student and the chief so as to avoid the latter's criticism[137].
- A supervisor who disdains medical students[138].
- A medical student who abases him or herself to a supercilious supervisor by fear of undermining his or her rotation journey[138].
- A supervisor who derides a subordinate (medical student or a trainee nurse or a technician) or a patient in front of medical students[138].
- A supervisor who abuses physically and psychologically a medical student[138].
- A medical student who witnesses unethical behaviors from supervisors.
- All ethical cases mentioned subsequently in the present thesis where the question of hierarchy is involved.

2/ The question of hierarchy within hospitals:

The authors of the Book "Ward ethics" brought to light three main patterns of healthcare teams' organization viz the military stratification, the sports model, and the mechanical model[69]. These categories were derived from the ethical situations discussed in the book and the interviews that the authors carried out with practitioners as well as apprentices. It is worth to mention that certain models often prevail in some specific medical specialties.

2.a/ The military model:

In this pattern, physicians perceive themselves as humanity's saviors who wage a constant battle against afflictions, pain, and demise. The military metaphors prevail in such structure where the hospital is assimilated to a garrison and the care team to warriors who "fight the good fight" under the command of a leader. This latter behaves as a commandant who defends his soldiers and team for evermore while plaguing them along the process. The military model is frequently embraced in surgical wards where it is claimed that, in the operating theatre, there is no luxury of time and decisions ought to be taken by a chief with no discussions. Some physicians argue that the temptation to glamorize the conception of life and death hanging on a thread during all surgeries should be resisted since it is only used as a pretext to support this militaristic pattern. Another element that explains the military stratification among surgeons is the historical context of warfare recounted in the book "Mending bodies, saving souls"[139] where surgeons often worked in field and army hospitals. After the Revolution, there were a coalescence of medical and surgical fields and that how the militaristic hierarchy integrated other medical specialties[139].

2.b/The sports model:

In the clinical wards that endorse the sports' spirit, gaining a position within the team hinges on the prospective member's efficiency and competence. Any person with a low performance would be sidelined and debarred from the clinical activities. To win the group's membership, trainees have to act as genuine team players who can carry the ball further, up to take the challenges and do not ever denounce their teammates. The process of socialization within such environments encompasses thrusting criticism and disdainful comments upon the novice members. One of the dreadful consequences of similar behaviors is that of the psychological projection; when the trainees project their perception of vulnerability and inadequacy on patients through derogatory jokes and supercilious comportments.

2.c/The mechanical model:

This model revolves around the perception of patients as defective machines that have to be fixed and restarted. The practice of medicine with this principle undermines the moral sense of physicians and the moral development of trainees who both become only technicians repairing damages. Further, reducing a disease to merely a breakdown denies the humanity of patients and all their pain, suffering and psychological experiences. This "repair" model echoes the supremacy of physicians over patients which is ethically unacceptable.

Portraying physicians as triumphant warriors, sports champions or skillful repairmen is illusory and impairs the perception of medical practitioners about their care duties and relationships with patients.

3/ Grounds:

The subsequent paragraph gave an insight on how healthcare teams can organize themselves and how this organization may influence their moral sense and their relationship with colleagues, subordinates and patients. The three models described hinge on a top-down pyramidal hierarchy where members of the team are stratified based on their level of expertise that defines their decision-making power[140]. These patterns are mainly endorsed since they help to plainly specify the obligations and degree of authority of each member and therefore preclude dispersal of responsibility and allow rapid decision-making in critical and urgent circumstances[140].

Medical students occupy the underside level of these hierarchies where they have to achieve their learning objectives, approach patients successfully, accomplish their ethical duties; all that along with abiding by the explicit and tacit "rules of the game" of the department[140]. The defeat to adhere to these codes might jeopardize the students' rotation journey, their grades, their psychological health, their moral development and in some cases their future carrier[140]. Consequently, a great part of the ethical dilemmas that trainees encounter in hospitals emanate from the daily endeavor to preserve oneself moral integrity while balancing the ethical conflicts against hierarchy, power and the prevailed "culture" in wards[69].

On the face of things, it may appear that power relationships are ever illegitimate and ethically questionable. Yet Holm deems power requisite to organization and draws a distinction between cases where its use is valid and tenable and cases where it is not[140]. Correspondingly, students may face situations where "a powerful member of the ward" may wield power legitimately or illegitimately and situations where the power relationship itself is illicit[140]. The concept of authority that is the legitimate exertion of power impels, in the context of medicine, superiors to only use their power to fulfil the task of medicine[140] which is to enhance human prosperity by the means of medical knowledge[141].

Admittedly, medical professionals ought to respect their seniors and the chain of command yet they have a moral obligation that transcends that; which is to remain loyal to the task of medicine[140]. Hence, in the instances where superiors, deliberately or not, exert power for reasons that do not subsume under this task and exceed authority, that loyalty may call subordinates for disobedience[140].

4/ Categories of ethical dilemmas with seniors:

Ethical quandaries that proceed from the question of power and hierarchy fall mainly into one of these categories:

- Follow unethical orders.
- Witness unethical behaviors.
- Experience unethical conducts.

It might be conceptually tempting to recommend to or expect medical trainees to embrace a resolute non-tolerance attitude and defy their superiors whenever they act unethically or adjure them to behave so[95]. Yet such approach appears to be quixotic since it dismisses the moral virtue of prudence and may in some cases endanger the students as well as their patients[95]. Indeed, medical students have an ethical responsibility towards patient but they also have a moral obligation with regard to themselves and therefore shall ponder the possible repercussions of any reaction they intend to take and "choose wisely their fight"[140]. This does not imply to acquiesce in ethical deceptions of superiors for the simple yet challenging moral precept that every choice, irrespective of how trivial, is a step of self-growth or decay[95]. But

rather it infers that assuming oneself ethical duties does not always entail violating the chain of command or disrespecting publicly the seniors. Morality requires sage courage. The hierarchy structure of hospitals is made for good reasons and is not constantly peremptory or despotic[140]. Hence, it ought not to be contravened in every moment trainees presume that an order are technically or morally not tenable[140].

4.a/ The order is presumed to be technically inappropriate:

If medical students appraise that a superior's order or act would compromise the patient care, they first have to ask for clarification[140]. Trotter drew attention that questioning a mentor's order should be timed adequately and that trainees need to eschew querying in the instances when superiors carry out a strenuous procedure, handle a critical situation or communicate with patients[140].

Clinical departments who grant their apprentices the freedom to discuss the superiors' decisions noted that students' involvement proved to significantly impact the ethical decisions of mentors more than the clinical ones[140]. Conversely, in the wards where open discourse between trainees and seniors is not permitted or unavailing or may undermine the patient or the trainees' journey or career, Holm suggests to create a secretive structure to receive and address the complaints of students about their superiors' behaviors[140]. One of the reasons that may explain why some supervisors refuse students' remarks is that they take their comments as a personal censure, and consider questioning their orders or commenting their behaviors as a menace to their authority or as a try to discredit or vilify them[140]. Yet expecting medical trainees to obediently follow the orders and acquiesce to the "ward culture" is morally degrading[1], as it tries to embed the supremacy and infallibility of the mentors.

4.b/ The order is appraised to be ethically inappropriate:

The most perplexing situations which create an ethical conundrum to the trainees are those who entail lying. These encompasses cases in which students are enjoined to write notes in the medical records without examining appropriately the patients[1] for time constraints, or distorting test or clinical findings so as to omit a care team's fault[129] or to faster the transfer of a patient to another department, or feigning an excuse to refuse referred patients. As mentioned

before, any senior's behavior that seems to be inappropriate should be first questioned to avoid any misunderstanding or delusion[137]. After excluding that, these lies ought not to be disregarded since they incur both moral and legal liability.

Medical records are the most reliable source of medical information and communication between physicians and shall on no account be falsified[129]. Altering a clinical finding or a test result may undermine the patient care in the future and mislead the prospective physicians about the patient's health condition[129]. Far worse if the notes were modified to conceal a care team's mistake. What if the student were appealed to attest about an incident that was disguised in the records? Would he or she admit the "imprecision" of the notes or acquiesce in the deception[129]? What if the student complied to refer the referred patient for no tenable cause and the latter died meanwhile or his or her health condition deteriorated during the transfer? How could the trainee reconcile with such immoral conducts?

4.c/ The superior's behavior is appraised to be ethically inappropriate:

- **When superiors lie to their superiors:**

No one can deny that almost every physician had at a certain moment concealed or lied for reasons of self-preservation to defend his or her image, prevent criticism, and elude disgrace[137]. An intransigent and hostile ethicism who merely describes these conducts as immoral, and does not take into account the complex structure of the clinical wards and the social and hierarchical determinants that interfere in, fails to respond to the one of the most crucial dilemmas of physicians' daily life[137]. Morality requires to have an eye on roots alongside consequences.

For a long time, medical culture instills in physicians the illusory need to be perfect and superhuman and when oneself fails to attain perfection, he or she just feign it[137]. Likewise, the formalistic rounds where attendings merely see their subordinates for presentation of cases deprive medical students, interns, and residents from the attending moral guidance and supervision of their interplays as caregivers and colleagues[137]. In such clinical environments where to lie and conceal has become more acceptable than to acknowledge an oblivion or an exhaustion, an overworked resident or an intern cannot concede in front of the attending to

defer or dismiss to check a test result or to accomplish a non-urgent task[137]. Regrettably, this lying pattern of superiors comes to be instilled to medical students as part of the hidden curriculum[137]. Thus, we are in front of two major problems:

- How students could remain honest in such milieu and not adhere to the culture of lying?
- How students should react when a superior lie to the chief?

To address the first issue, students have to choose mentors of moral virtue and try to encounter them so to learn how they handle situations that others elude with lies. Establishing a high standard and drawing a clear portrait of the virtuous physician students aspire to be would help students be loyal to ethical values[95]. If faculty members are to seriously consider the promotion of probity, they have to set up an educational environment where they, along with the attendings, devote time to interact and instill honesty and moral values in their residents, interns, and medical students[137]. Teaching moral virtues could be easy if the attendings and faculty members are virtuous[137].

In respect of the second matter, it is deemed morally counterproductive to hold students responsible for addressing alone such situation[137]. This issue demands institutional reactions to retrieve the circumstances that allow dishonesty and does not require merely individual moral bravery[137]. To push trainees into the binary choice of questioning publicly the truthfulness of a superior or maintaining silence is delusive[137]. It is supererogative and inappropriate to embrace the confronting attitude; supererogative because telling truth from a "subjugation" position entails superhuman bravery, and inappropriate since it may undermine the student, the superior, the integrity of the care team and the relationship between its members, and the integrity of the hospital and the profession[137]. For students, challenging and denouncing superiors could be considered as betrayal to the team spirit and the trainee could be labeled and treated as an outcast[137]. From the superior's position, such situation could jeopardize his or her carrier and sentence his or her trustworthiness for life[137]. Yet letting go such immoral behaviors would make the medical student conspirator[137]. When oneself recognizes the ethical responsibility and the need to react, the matter becomes a question of "what to do" instead of "whether to do"[137]. There is always a wide scope of clever alternatives that one could choose to address any

dilemma. Approaching privately the superior could be an option if the student infers that their relationship allows an open and honest discussion[137]. Conversely, the superior ought to be approached by the higher members of the hierarchical structure and it is the duty of the medical trainee to notify them[137].

This ethical quandary reminds how care teams could influence the sharing of patients' information between the members and draws attention to the ethical weight of the team players to preclude any misleading and respond to it. Further, it calls faculty members and hospitals to promote safe disclosure of oversights[137].

- **When superiors disdain their subordinates:**

On the first insight, it may appear that this category of situations does not subsume under the medical ethical conundrums from a traditional approach[138]. Yet the ideal of medicine cannot be fulfilled if the clinical milieu lacks respect between its members[138]. Further, how could physicians be expected to honor patients if they could not prize their colleagues and subordinates? At short notice, it might feel attractive and pleasing to nurture oneself ego by stressing and demeaning the trainees' inexperience and ignorance, but in fact it deteriorates the moral integrity of the senior and undermines the psychological health, the confidence, and the moral development of the medical students[138]. Indeed, the exhausting milieu where interns, residents, and attendings work might adversely influence their behaviors, yet the subordinates ought not to be treated as means to way out superiors' own frustrations[138]. More critical, these unethical behaviors deflect away from the duty to care, the moral virtues of medicine, and the learning objectives of medical training[138]. Besides, disdain and mockery damage the image of the seniors as moral mentors for students, and put the latter in a perplexing situation where they have to constantly reject the defective representation of the moral essence of medicine[138]. The result is an increase of students' moral distress.

Medical schools and hospitals should establish a structure to receive the complaints of psychological or physical abuses. More, faculty members ought to organize open discussion sessions where students can share such unpleasant experiences to get help to surpass them and learn how to handle similar situations in future.

Section3: With the drug industry

1/ The ethical dilemmas:

- Clinical teachers who provide learning materials to medical students with logos of pharmaceutical companies[142].
- Medical students who receive industry-funded support for their doctoral thesis[142].
- Seniors who ask medical students to attend industry-funded lectures[142] and lunches[143].
- Medical students who receive financial support for tuition fees[143,144].

2/ The question of conflict of interest:

The marketing strategies of drug companies hinge on the exploitation of the concepts of social psychology to influence the therapeutic decision-making of physicians and therefore increase the industries' profits[145]. These elaborate, multifarious business model tends to inculcate in physicians the attractive yet delusive portrait of companies' generosity and conviviality[145]. Adversely, these commercial activities augment drastically the drugs costs at the expense of patients and governmental institututions[146,147]. Besides, they raise questions about the professional independence of medical care institutions and physicians and the trustworthiness of the latter[148]. Not to mention the negative impact they have on physicians' prescription by prioritizing new medications over affordable and as efficient alternatives[149–151]. To ethically respond to promotional activities, medical schools, faculty members, hospitals, and healthcare teams – including students – ought to be aware of subconscious biases that are used to influence and undermine moral medical practice[145].

- **<u>Physicians' own biases:</u>**
  - The illusion of invulnerability:

It is often presumed that the deliberate commitment to moral virtues will protect physicians from all sorts of promotional influence[145]. However, literature ascertains that it appears to be insufficient since it merely prevents explicit corruption but fails to preclude subconscious biases[145]. Overall, humans have "a bias blind spot" that makes them capable to acknowledge the subliminal biases that influence the behavior of others yet imperceptive of

their own biases[152,153] . More, even those who admit to be individually biased, they often tend to underrate how vulnerable they are[154]. Clearly, the delusive optimism[153] of unique immunity towards marketing strategies[155] impede alert awareness and thus resistance of manipulatives commercial techniques. Hence, the first measure that physicians ought to take to remediate to this matter is to accept their own vulnerability and susceptibility[145].

- The illusion of worth:

Physicians often take many medical privileges inherent to patient care as a matter of course, including industry-funded profits[156]. The onerousness of medical training, the conditions of practice, the low salaries make a great part of physicians believe that they are worthy of industry indulgence[143,157]. This attitude could find an explanation in the Adams' equity theory in which it is inferred that employees who appraise that their inputs (what they give to their institutions) outweigh the outputs (what they get back), resort to either reducing their work contributions or to rising their benefits[158]. Further, a study of physicians' willingness to accept industry rewards found that tacit and explicit reminders of the hardship of medical education and career were proven to push physicians, unconsciously, to concur with the tenability of the acceptance of companies' gifts[157].

- The social influence:

Physicians work in an environment with a prevailing culture that is likely to influence the behavior and judgment of its members. Thus, when an attitude is considered as socially "normal", namely the acceptance of industries' gifts, physicians would adhere to the culture and do what others are doing[145]. This social validation[159–161] carries more weight when it is endorsed by trusted mentors and role models[145].

- The self-serving bias:

In morally equivocal situations, individuals often have propensity to conflate what is just with what serves their self-interests[155,162]. Their assessment to what is fair is unconsciously biased towards what they want to see and believe[157] . In respect of our question, this self-serving standpoint impede physicians from appropriately assessing the righteousness of accepting industry-funded gifts[145].

- **Industries' persuasion tools:**

  - Reciprocity:

Gift-giving call forth reciprocation; this is a basic rule of human interaction that companies adversely exploit in their marketing manipulations[163]. Industry-funded profits are meant to creates in physicians a subconscious sentiment of indebtedness with a social pressure to requite[164].

  - Commitment:

Physicians happen to pretend their willingness to prescribe a specific drug in front of sales representatives so as to promptly end the conversation[145]. Or, they may agree to "small" requests of representatives that are to prescribe a new medication to the prospective two or three patients for instance[145]. These apparently trivial statements are nevertheless powerful by two mechanisms: commitment and consistency. Sales representatives know that some physicians would feel compelled to fulfil their promises to them[165]. After that, physicians would rationalize their attitude by standing consistent with it[145]. Big commitments start with small ones.

  - The illusion of caring:

Sales representatives shape every industry-funded profit as an act of pure friendship[165]. They spent significant time and energy sympathizing with physicians, providing them considerable opportunities, free meals, free samples and building personal relationships with them[165]. They buy love to gain money[166].

3/ Grounds:

Many medical schools do not include in their formal curriculum lectures regarding the issue of relationship with drug industries[148]. Consequently, medical students often feel unready to deal with promotional events and gifts with neither definite guidelines nor educational activities on the matter[167–169]. Due to this lack of formal education and guidance, serious ethical dilemmas arise about the medical students – industry relationship.

☞ Experts' commentary:

Although medical students have no power to prescribe medicines, sales representatives continue to provide them industry-funded gifts which suggests that it is almost certain that interactions with trainees increase, directly or not, the sales revenue of drug companies[170]. One of the indirect and long-term benefits is that of laying the grounds to future interactions once trainees become physicians[171]. In contrast, medical students presume themselves immune to industries manipulations and free from any reciprocal pressure since they cannot prescribe any products[170]. If we leave aside what has been mentioned above and agree to such presumption, the moral detriment that proceeds from exploiting any organization, or believing to do so, without fulfilling reciprocal duties worth attention[170]. The act of exploitation is inconsistent with appropriate moral development indispensable to good medical practice[170]. Furthermore, accepting industry-funded rewards mute trainees' criticism of industry-physician relationship issue which deprive societies from the power of "the young" to redress what "the elderly" admits as normal[170].

To help address this matter, medical schools have to develop a clear policy about all industry-funded practices and ensure that all students are aware of it[172–178]. In fact, it has been proven that students whose schools constrain industries interaction were more incredulous about promotional activities than those who studied in schools that have no restriction policy[144]. Besides, medical universities have to encourage students' initiatives since a mere policy of prohibition is likely to make restricted practices more attractive[170] and therefore would be insufficient to shape actual and future attitudes of students[144]. A brief synopsis of the American medical student associations, the New Zealand Medical Students' Associations and the Australian Medical Student's Association's initiatives can be founded in the Appendix3. Moreover, faculty members have to organize lectures about the psychosocial manipulations of industries, the issue of conflicts of interest, the policies of different countries, the relationship of industries with all healthcare institutions and workshops about how to effectively and ethically deal - as students - with the different marketing activities and how to interact with the sales representatives. Further, medical colleges could establish an informed consent strategy to give students the freedom to choose to be or not exposed to industries' practices[170]. All these

actions ,if not upheld by teachers and mentors, would have modest impact on medical students[145]. The influence of role models on apprentices' behaviors and beliefs transcend the power of formal curriculum or policies[145].

CHAPTER FOUR: DISCUSSION AND RECOMMENDATIONS

1/ Discussion:

Along the Chapter three, we have introduced some of the main ethical dilemmas that medical students encounter during their clinical training, tried to identify the roots of each moral question and presented the experts' statements and recommendations about the cases. For the purpose of this thesis, these ethical situations were identified in consonance with the Moroccan context. Since there is no study that explores their nature and prevalence among Moroccan students, the choice of the ethical problems to be addressed was in the light of experiences of the researcher and advisor of this work as well as their colleagues.

After considering the salient literature on the matter, it can be stated that most of the studies that described the ethical dilemmas confronted by medical students classified their findings based on "a theme continuum". Box1 summarize the major categories of the ethical issues identified in the literature.

- Decision-making issues[3,8,78]
- Professionalism issues[3,8,78]
- Justice issues[3,8,78]
- Informed consent issues[3,8]
- Conflicts of interest issues[3]
- Conflicts between medical education and patient care issues[3,8,10,78]
- Medical care team communication issues[3,8]
- Patient – care team communication issues[3,8,78]
- Confidentiality issues[3,78]
- Students' responsibility issues[8,10,78]

Box 1 : Major categories of the ethical issues in literature

In respect of the present thesis, the approach that has been endorsed to categorize the ethical situations is students-centric. It addresses some aspects of their relationship with patients and superiors as well as their interaction with industries. A similar classification was embraced by two other references[1,179]. Notably, these two sorts of categorizations disregard the responsibility of medical trainees in respect of the ethical dilemmas they encounter daily. In fact, when students raise questions about ethical issues, they expect to get answers on the scope of their moral duty and how to handle unethical situations if they have to. Correspondingly, a classification based on a responsibility perspective would be more useful to them. This classification would help the medical students identify the degree of their moral obligation in a certain situation and respond in view of it. Benshalom, from the Occupational Entity of Israel, introduced in her PhD Thesis an interesting typology of ethical conundrums according to a "responsibility continuum"[12]. This typology categorizes all the ethical problems into three groups (Table 1).

Table 5 : Ethical dilemmas categories

Type of ethical dilemmas	Definition of ethical dilemmas
Reflection dilemmas	Ethical problems that intrigue students and raise theoretical questions but do not appeal any moral duty. The end-of-life issues is a paradigm of it.
Witnessing and optional reaction dilemmas	Situations where students observe unethical behaviors of their colleagues and seniors that call more or less their moral responsibility. In these cases, trainees can respond either directly and instantly or indirectly and tardily (e.g. defer the discussion with the classmate or the superior, report to a responsible party or remain silent).
Action dilemmas	Problems that are inherent to the students' status in the ward and require immediate response. They concern trainees' relationship with patients and the conflicts between patient care and medical education.

If it is to classify the ethical dilemmas discussed in this dissertation in reference to the responsibility continuum, they will fall within the group of "action dilemmas" with the exception of some situations with seniors which will subsume under the "optional reaction" category.

Yet how medical students actually respond when a certain unethical behavior calls their moral duty, whether immediately or distantly? Do they act, react or do they acquiesce and stay silent? Studies that approached this question showed different coping strategies of medical students towards ethically questionable situations[12] (Figure1).

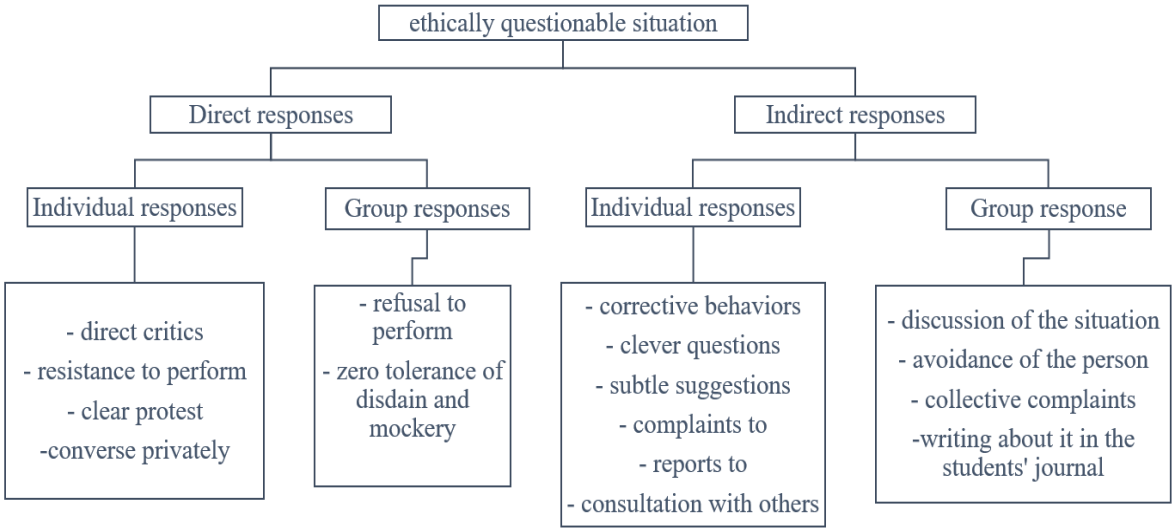

Figure 1 : Students' coping strategies in ethically questionable situations

Figure 1 gives insight on the main methods medical students use to actively cope with the ethical problems they encounter in their training. Admittedly, the mechanism of response to an unethical act is a complex process that depends on several elements viz the first person involved in the situation, his or her relationship with the student, the personality of the student or the cohesion of the group, the nature of the situation, the degree of students' involvement, the potential harm to the injured party (whether it is a patient, a classmate, a member of the care team or the student), the probable repercussions on the student, and other considerations.

Clearly, medical students do not always respond actively to ethical cases. In fact, The "no-action, acquiescence, silence" pattern is largely embraced by students[12,180]. Trainees justify

the reasons of this attitude by different arguments which are gathered, in the limits of the narrative review conducted, in Box2.

1/Self-preservation:

- dread of reprisal[12,107,179,180]: undermining the rotation journey, the grades, future career, writing unfair evaluations.

- dread of marginalization and failure to integrate the care team[179].

- dread of disloyalty's accusation[179,180].

2/ personal doubts:

- doubts about inexperience and ethical judgment of the behavior[12,180].

- doubts about the "excessive" moral sensitivity and lack of objectivity[12].

- doubts about the right to put in question the moral integrity of others[12].

- doubts about the efficiency of active response to change others' attitudes [12,180] .

3/ reasons related to the clinical milieu:

- the issue of hierarchy.

- the absence of structure to receive the complaints.

- the social validation of the behavior in question[69,145].

4/ the external and transient status of medical students[12].

Box 2 : Students' justifications of their no-action attitude in ethically questionable situations

It is the accountability of faculty members and clinical teachers to alleviate the apprehensions and doubts of students, and of the medical schools and hospitals to ensure that the training milieu is favorable and supportive. Medical students shall be aware that uncertainty about a judgment is not a rationale to remain silent and passive[180]. Incertitude is inherent to medicine and medical ethics[180], and it is better to act on doubtful grounds than not to act at all. Further, doubts about efficiency of responding ought to be considered an opportunity to be

creative and find the good timing and manner to express the ethical concern[180]. Besides, the fear of possible repercussions on educational path and future career ought to draw attention about the students' conception of moral integrity. Remarkably, trainees accept to carry out some invasive medical procedures despite the risk of transmission and consider such courage as inherent to the nature of the profession[180]. In contrast, some of them consider active response to unethical conducts as merely a personal choice that transcends the scope of medical practice[180]. The idea that, training and vocation entail to disregard today the moral essence of medicine to become tomorrow the decent physician one hopes to, ought to be resisted. In fact, the attitude of ceaseless silence is a failure to learn medical care[180]. It is worth to note Dwyer's wish to instill into students the Socratic aphorism "*Primum non tacere*: first, do not be silent" in parallel with the Hippocratic one "*Primum non nocere*: first, do no harm"[180].

After this discourse, one would query whether medical students worldwide face the same ethical issues during their training journey. In a recent study that compared between ethical problems of Indonesian and Dutch students, the researchers found aspects of difference as well as resemblance[74]. In the Indonesian setting, the ethical dilemmas were often related to dearth of resources and inaccessibility of care, which reflects the deficiency of the healthcare system and clearly the developing status of the country. Further, the Indonesian situations revealed problems of hierarchy, power abuse and administrative burdens. Conversely, in the Dutch context, the issues of end-of-life, confidentiality, procreational technologies and euthanasia were much more prevailing. Likewise, both settings referred to the matter of care providers' immoral behavior but with more prevalence in the Indonesian setting. These findings highly suggest that the sociocultural background and the quality of the healthcare system shape the ethical milieu of medical care and medical education[74]. Hence, medical schools need to adapt their medical ethics program to these two elements, acknowledge the particularity of each setting and address the ethical questions students worry about in their daily practice[74]. Adversely, the absence of moral guidance may lead students to inaptly respond to unethical situations which would undermine their moral development.

2/ Recommendations:

In the present work, it has been presented and discussed some of the ethical issues medical students struggle with during their clinical training. On the face of each dilemma, specific recommendations and ethical guidelines were pointed out as well as regulations when there were implemented. This last section aims to introduce general suggestions to be applied to the Moroccan context or similar settings.

2.a/ Research work:

Moroccan researchers ought to conduct qualitative studies to define the nature and prevalence of ethical issues Moroccan medical students face during their learning:

- interviews with medical students.
- medical students' focus groups.
- narratives, dissertations, and personal stories of medical students.
- questionnaires to medical students.
- faculty members' focus groups.

2.b/ Medical curricula:

In the light of the studies' findings, faculty members will be able to identify the learning needs of medical students in respect of medical ethics and thus adapt the curricula accordingly, using all the already implemented vectors of medical teaching.

- **Lectures:**

Faculty members would have to approach during their class the ethical issues specific to medical students in parallel with the worldwide ethical questions. Further, it appears to be interesting to introduce a module of medical humanities notably social sciences to help students understand themselves and their relationship with all members of the practicing environment.

- **Clinical sessions:**

During rounds, clinical teachers and attendings ought to supervise medical students and provide them with the moral guidance to handle appropriately unethical situations and to preserve their moral integrity. Besides, they shall discuss with them ethical issues specific to departments and medical specialties.

- **Ethical sessions:**

Ethics teachers shall organize group sessions to discuss with students their personal experiences and help them to strengthen their moral vigilance and behaviors.

2.c/ Raising awareness:

Ethics teachers have to organize sessions to clinical teachers and attendings to call their attention to ethical issues specific to medical students. The aim of these sessions is to sensitize them and highlights the importance of their cooperation to achieve the objectives of good ethical education.

2.d/ Establish regulations:

It will be of a great benefit if Moroccan officials establish clear regulations regarding the legal status of medical students within hospitals and the scope of their responsibilities, and develop proper guidelines in respect of their observation, involvement, and performance of all medical interventions.

2.e/ Implement complaints' structure:

It has been mentioned earlier in this dissertation that it is needed to establish a system to receive and address, confidentially, the reports of medical students about unethical conducts.

This dissertation sheds a light on the matter of ethical issues specific to medical students and we expect that this would draw Moroccan teachers' and researchers' attention to this question that has long been ignored.

LIMITATIONS OF THE THESIS

Despite its added value, the present work has some limitations that are mainly inherent to its study design and to the researcher and advisor's local setting.

- **In respect of the design of the study:**

This work is a narrative review which entails that:

  - The identification of articles was non-exhaustive.
  - There was no systematic protocol of research.
  - The selection of papers was subjective to the author's and advisor's preferences.
  - Not all the ethical dilemmas of medical students were discussed.
  - The selection of ethical dilemmas to be discussed was subjective.

- **In respect of the Moroccan context:**

There is no study that explores the nature and prevalence of the ethical dilemmas among Moroccan medical students, thus the choice of the ethical problems to be addressed was in the light of experiences of the researcher and advisor of this thesis as well as their colleagues.

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ABSTRACTS

Abstract

Title: Introduction to medical students' ethical issues: a narrative review
Author: CHOUDALY Hajar
Keywords: Medical students; Medical ethics education; Ethical dilemmas; Moral dilemmas.

Background: Contemporary medical ethics curricula often tend to overemphasize end-of-life, research, and procreational issues to the detriment of ethical dilemmas that face medical students during their training journey. One could not challenge the importance of the former matters nevertheless they transcend the students' decision-making area and do not pursue their ongoing ethical development.

Aim: To identify ethical questions specific to medical students, ascertain their roots and present the experts' recommendations in respect of.

Methods: From March 16, 2020 to June 16, 2020, a narrative review of literature was conducted to identify the ethical dilemmas medical students encounter daily during their clinical training. To find relevant papers, 3 Databases were searched: MEDLINE (Ovid), EMBASE (Ovid), PsycINFO (Ovid).

Results: Five ethical questions were addressed viz the professional identity of medical students, physical examinations' and medical procedures' issues, the relationship between medical students and their superiors, and interactions between medical students and drug industries.

Conclusion: It is important to shed light upon the ethical matters inherent to the status of medical students and their grounds. Cooperation between ethical pedagogues, medical schools, and hospitals is imperative to successfully address the causes of these dilemmas and provide moral guidance to medical students.

Résumé

Titre : Introduction aux dilemmes éthiques des étudiants en Médecine : revue narrative

Auteur : CHOUDALY Hajar

Mots clés : Étudiants en médecine, éthique médicale, problèmes éthiques.

Contexte : Les programmes d'enseignement de l'éthique médicale souvent insistent sur les sujets relevant du domaine de la recherche biomédicale, les enjeux de fin de vie au détriment des dilemmes éthiques qui rencontrent les étudiants en Médecine au cours de leurs stages cliniques. Certes, ces sujets mentionnés sont d'une importance indéniable cependant ils dépassent le champ de décision des étudiants et leur développement moral.

Objectif : identifier les questions éthiques spécifiques au statut des étudiants en Médecine, comprendre leurs causes et présenter les recommandations des experts.

Méthodologie : La recherche des articles qui décrivent les problèmes éthiques des étudiants en Médecine a été effectuée entre le 16 Mars et 16 Juin 2020. Les bases de données accédées sont : MEDLINE (Ovid), EMBASE (Ovid), PsycINFO (Ovid).

Résultats : 5 questions éthiques ont été traités dans cette revue de littérature soit : l'identité professionnelle des étudiants, la conduite de l'examen clinique et des procédures médicales, la relation entre les étudiants et leurs supérieurs et enfin l'interaction des étudiants avec les industries pharmaceutiques.

Conclusion : Il se révèle important de mettre l'accent sur les problèmes éthiques inhérents au statut des étudiants en Médecine ainsi que leurs origines. Une coopération entre les Facultés de Médecine, les hôpitaux et les spécialistes en pédagogie est nécessaire pour adresser les causes de ces dilemmes et assurer l'orientation éthique des étudiants en Médecine.

ملخص

العنوان: مدخل إلى تساؤلات طلبة الطب الأخلاقية: مراجعة وصفية

المؤلف: هاجر شُدالي

الكلمات الأساسية: أخلاقيات الطب، طلبة الطب، الإشكاليات الاخلاقية، التساؤلات الأخلاقية

السياق : تولي مناهج أخلاقيات الطب أولوية لقضايا الساحة العلمية المعاصرة على حساب التساؤلات الأخلاقية التي تواجه طلبة الطب خلال تدريباتهم السريرية. لا اعتراض على أن الإشكاليات التي تؤرق ممارسي الطب ذات أهمية بالغة إلا أنها تتجاوز نطاق مسؤولية و قرار الطلبة و لا تواكب تكوينهم الأخلاقي.

المقصد : التعريف بالتحديات الأخلاقية التي تعترض طلبة الطب و أسبابها و تقديم حلول لمعالجتها.

المنهجية : روجعت الأبحاث التي تعنى بإشكاليات طلبة الطب الأخلاقية و تناقش جذورها و تقدم توصيات الخبراء لتجاوزها. اعتُمِد في استخراج الأوراق البحثية على ثلاث منصات بيانات:

.PsycINFO، EMBASE ،MEDLINE

النتائج : نوقِشت خمس تساؤلات أخلاقية يصادفها الطلبة المتدربون وهي: سؤال الهوية المهنية، علاقة الطلبة برؤسائهم و بمؤسسات الصناعة الدوائية، الإشكاليات المتعلقة بالفحص السريري للمرضى وإجراء التدخلات الطبية.

الخلاصة : على ضوء هذا الطرح، يُقترح أن تتظافر جهود الأطر التربوية و الجامعات لتجاوز هذه الثغرة و توفير التوجيه الأخلاقي اللازم للطلبة.

APPENDIX

Appendix 1: Full text of the classic Hippocratic oath, the Louis Lasagna oath, the Declaration of Geneva, and the Prayer of Maimonides.

(1) Classic Hippocratic oath (English translation):

1.1 I SWEAR BY APOLLO THE PHYSICIAN AND BY ASCLEPIUS AND BY HEALTH AND PANACEA AND BY ALL THE GODS AS WELL AS GODDESSES,

1.2 MAKING THEM JUDGES [WITNESSES], TO BRING THE FOLLOWING OATH AND WRITTEN COVENANT TO FUL- FILLMENT, IN ACCORDANCE WITH MY POWER AND MY JUDGMENT;

2.1 TO REGARD HIM WHO HAS TAUGHT ME THIS TECHNE AS EQUAL TO MY PARENTS,

2.2 AND TO SHARE, IN PARTNERSHIP, MY LIVELIHOOD WITH HIM AND TO GIVE HIM A SHARE WHEN HE IS IN NEED OF NECESSITIES, AND TO JUDGE THE OFFSPRING [COMING] FROM HIM EQUAL TO [MY] MALE SIBLINGS,

2.3 AND TO TEACH THEM THIS TECHNE, SHOULD THEY DESIRE TO LEARN [IT], WITHOUT FEE AND WRITTEN COVENANT,

2.4 AND TO GIVE A SHARE BOTH OF RULES AND OF LECTURES, AND OF ALL THE REST OF LEARNING, TO MY SONS AND TO THE [SONS] OF HIM WHO HAS TAUGHT ME.

2.5 AND TO THE PUPILS WHO HAVE BOTH MAKE A WRITTEN CONTRACT AND SWORN BY A MEDICAL CONVENTION BUT BY NO OTHER.

3.1 AND I WILL USE REGIMENS FOR THE BENEFIT OF THE ILL IN ACCORDANCE WITH MY ABILITY AND MY JUDGMENT,

3.2 BUT FROM [WHAT IS] TO THEIR HARM OR INJUSTICE I WILL KEEP [THEM].

3.3 AND I WILL NOT GIVE A DRUG THAT IS DEADLY TO ANYONE IF ASKED [FOR IT], NOR WILL I SUGGEST THE WAY TO SUCH A COUNSEL.

3.4 AND LIKEWISE I WILL NOT GIVE A WOMAN A DESTRUCTIVE PESSARY.

4.1 AND IN A PURE AND HOLY WAY I WILL GUARD MY LIFE AND MY TECHNE.

4.2 I WILL NOT CUT, AND CERTAINLY NOT THOSE SUFFERING FROM STONE, BUT I WILL CEDE [THIS] TO MEN [WHO ARE] PRACTITIONERS OF THIS ACTIVITY.

5.1 INTO AS MANY HOUSES AS I MAY ENTER, I WILL GO FOR THE BENEFIT OF THE ILL,

5.2 WHILE BEING FAR FROM ALL VOLUNTARY AND DESTRUCTIVE INJUSTICE,

5.3 ESPECIALLY FROM SEXUAL ACTS BOTH UPON WOMEN'S BODIES AND UPON MEN'S, BOTH OF THE FREE AND OF THE SLAVES.

6.1 AND ABOUT WHATEVER I MAY SEE OR HEAR IN TREATMENT, OR EVEN

WITHOUT TREATMENT, IN THE LIFE OF HUMAN BEINGS.

6.2 THINGS THAT SHOULD NOT EVER BE BLURTED OUT OUTSIDE.

6.3 I WILL REMAIN SILENT, HOLDING SUCH THINGS TO BE UNUTTERABLE [SACRED, NOT TO BE DIVULGED],

7.1 IF I RENDER THIS OATH FULFILLED, AND IF I DO NOT BLUR AND CONFOUND IT [MAKING IT TO NO EFFECT] MAY IT BE [GRANTED] TO ME TO ENJOY THE BENEFITS BOTH OF LIFE AND OF TECHNE,

7.2 BEING HELD IN GOOD REPUTE AMONG ALL HUMAN BEINGS FOR TIME ETERNAL.

IF, HOWEVER, I TRANSGRESS AND PURJURE MYSELF,

THE OPPOSITE OF THESE.

Edelstein L. The Hippocratic Oath, text, translation and interpretation. Baltimore: Johns Hopkins University Press; 1943.

(2) Louis Lasagna text (a modified version of the Hippocratic oath):

I swear to fulfill, to the best of my ability and judgment, this covenant:

I will respect the hard-won scientific gains of those physicians in whose steps I walk, and gladly share such knowledge as is mine with those who are to follow.

I will apply, for the benefit of the sick, all measures [that] are required, avoiding those twin traps of overtreatment and therapeutic nihilism.

I will remember that there is art to medicine as well as science, and that warmth, sympathy, and understanding may outweigh the surgeon's knife or the chemist's drug.

I will not be ashamed to say "I know not," nor will I fail to call in my colleagues when the skills of another are needed for a patient's recovery.

I will respect the privacy of my patients, for their problems are not disclosed to me that the world may know. most especially must I tread with care in matters of life and death. if it is given me to save a life, all thanks. But it may also be within my power to take a life; this awesome responsibility must be faced with great humbleness and awareness of my own frailty. Above all, I must not play at God.

I will remember that I do not treat a fever chart, a cancerous growth, but a sick human being, whose illness may affect the person's family and economic stability. My responsibility includes these related problems, if I am to care adequately for the sick.

I will prevent disease whenever I can, for prevention is preferable to cure.

I will remember that I remain a member of society, with special obligations to all my fellow human beings, those sound of mind and body as well as the infirm.

If I do not violate this oath, may I enjoy life and art, respected while I live and remembered with affection thereafter. May I always act so as to preserve the finest traditions of my calling and may I long experience the joy of healing those who seek my help.

Lasagna L. Hippocratic Oath, modern version, 1964.

(3) Prayer of Maimonides:

It is ascribed to Moses Maimonides, a medieval Jewish physician and philosopher. The Oath of Maimonides is a condensed version of the Prayer of Maimonides which is to be recited prior to visiting patients.

3.a/ the Oath of Maimonides:

> The eternal providence has appointed me to watch over the life and health of thy creatures. May the love for my art actuate me at all time; may neither avarice nor miserliness, nor thirst for glory or for a great reputation engage my mind; for the enemies of truth and philanthropy could easily deceive me and make me forgetful of my lofty aim of doing good to thy children.
>
> May I never see in the patient anything but a fellow creature in pain.
>
> Grant me the strength, time and opportunity always to correct what I have acquired, always to extend its domain; for knowledge is immense and the spirit of man can extend indefinitely to enrich itself daily with new requirements.
>
> Today he can discover his errors of yesterday and tomorrow he can obtain a new light on what he thinks himself sure of today. Oh, God, thou has appointed me to watch over the life and death of Thy creatures; here am I ready for my vocation and now I turn unto my calling.

Friedenwald H. The physician's oath and prayer of Maimonides. Bull Johns Hopkins Hospital 1917;28:260–1.

3.b/ the Prayer of Maimonides:

> Almighty God, Thou has created the human body with infinite wisdom. Ten thousand times ten thousand organs hast Thou combined in it that act unceasingly and harmoniously to preserve the whole in all its beauty the body which is the envelope of the immortal soul. They are ever acting in perfect order, agreement and accord. Yet, when the frailty of matter or the unbridling of passions deranges this order or interrupts this accord, then forces clash and the body crumbles into the primal dust from which it came. Thou sendest to man diseases as beneficent messengers to foretell approaching danger and to urge him to avert it.
>
> Thou has blest Thine earth, Thy rivers and Thy mountains with healing substances;

they enable Thy creatures to alleviate their sufferings and to heal their illnesses. Thou hast endowed man with the wisdom to relieve the suffering of his brother, to recognize his disorders, to extract the healing substances, to discover their powers and to prepare and to apply them to suit every ill. In Thine Eternal Providence Thou hast chosen me to watch over the life and health of Thy creatures. I am now about to apply myself to the duties of my profession. Support me, Almighty God, in these great labors that they may benefit mankind, for without Thy help not even the least thing will succeed.

Inspire me with love for my art and for Thy creatures. Do not allow thirst for profit, ambition for renown and admiration, to interfere with my profession, for these are the enemies of truth and of love for mankind and they can lead astray in the great task of attending to the welfare of Thy creatures. Preserve the

strength of my body and of my soul that they ever be ready to cheerfully help and support rich and poor, good and bad, enemy as well as friend. In the sufferer let me see only the human being. Illumine my mind that it recognizes what presents itself and that it may comprehend what is absent or hidden. Let it not fail to see what is visible, but do not permit it to arrogate to itself the power to see what cannot be seen, for delicate and indefinite are the bounds of the great art of caring for the lives and health of Thy creatures. Let me never be absent- minded. May no strange thoughts divert my attention at the bedside of the sick, or disturb my mind in its silent labors, for great and sacred are the thoughtful deliberations required to preserve the lives and health of Thy creatures.

Grant that my patients have confidence in me and my art and follow my directions and my counsel. Remove from their midst all charlatans and the whole host of of ficious relatives and know-all nurses, cruel people who arrogantly frustrate the wisest purposes of our art and often lead Thy creatures to their death.

Should those who are wiser than I wish to improve and instruct me, let my soul gratefully follow their guidance; for vast is the extent of our art. Should conceited fools, however, censure me, then let love for my profession steel me against them, so that I remain steadfast without regard for age, for reputation, or for honor, because surrender would bring

to Thy creatures sickness and death.

Imbue my soul with gentleness and calmness when older colleagues, proud of their age, wish to displace me or to scorn me or disdainfully to teach me. May even this be of advantage to me, for they know many things of which I am ignorant, but let not their arrogance give me pain. For they are old and old age is not master of the passions. I also hope to attain old age upon this earth, before Thee, Almighty God!

Let me be contented in everything except in the great science of my profession. Never allow the thought to arise in me that I have attained to sufficient knowledge, but vouchsafe to me the strength, the leisure and the ambition ever to extend my knowledge. For art is great, but the mind of man is ever expanding.

Almighty God! Thou hast chosen me in Thy mercy to watch over the life and death of Thy creatures. I now apply myself to my profession. Support me in this great task so that it may benefit mankind, for without Thy help not even the least thing will succeed.

"PRAYER OF MAIMONIDES." California state journal of medicine vol. 16,1 (1918): 51.

(4) Declaration of Geneva (the revised version of 2017):

It was embraced by the World Medical association in Geneva 1948 and since has been revised 7 times. The last amendment was back in Chicago 2017.

AS A MEMBER OF THE MEDICAL PROFESSION:

I SOLEMNLY PLEDGE to dedicate my life to the service of humanity;

THE HEALTH AND WELL-BEING OF MY PATIENT will be my first consideration;

I WILL RESPECT the autonomy and dignity of my patient;

I WILL MAINTAIN the utmost respect for human life;

I WILL NOT PERMIT considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing or any other factor to intervene between my duty and my patient;

I WILL RESPECT the secrets that are confided in me, even after the patient has died;

I WILL PRACTISE my profession with conscience and dignity and in accordance with good medical practice;

I WILL FOSTER the honor and noble traditions of the medical profession;

I WILL GIVE to my teachers, colleagues, and students the respect and gratitude that is their due;

I WILL SHARE my medical knowledge for the benefit of the patient and the advancement of healthcare;

I WILL ATTEND TO my own health, well-being, and abilities in order to provide care of the highest standard;

I WILL NOT USE my medical knowledge to violate human rights and civil liberties, even under threat;

I MAKE THESE PROMISES solemnly, freely, and upon my honor.

https://www.wma.net/policies-post/wma-declaration-of-geneva/

Appendix 1 : Example of regulations of students' observation and performance of physical examination:

(1) APGO's statement on teaching pelvic examinations**:

The association of professors of Gynecology and Obstetrics (APGO) recommend that medical students carry out a pelvic examination of conscious and anesthetized patients only if:

- Explicitly consented to;
- Related to the planned procedure;
- Performed by a student who is recognized by the patient as a part of their care team; AND
- Done under direct supervision by the educator.

APGO Releases Statement on Teaching Pelvic Exams to Medical Students. APGO. https://www.apgo.org/teaching-pelvic-exams-to-med-students/

** these recommendations are embraced by the Association of American Medical Colleges (AMC), the American College of Obstetricians and Gynecologists (ACOG), the American College of Osteopathic Obstetricians and Gynecologists, and the Advancing Female Pelvic Medicine and Reconstructive Surgery (AUGS).

(2) Consensus statement prepared by the Faculties of Medical and Health Science of the Universities of Auckland and Otago, Chief Medical Officers of District Health Boards, New Zealand Medical Students' Association and the Medical Council of New Zealand**

From: Principle 7

For many purposes, notably many instances of observation, it is appropriate to obtain (or confirm) consent verbally and informally.

Principle 13

Sensitive examinations (includes breast, rectal, vaginal examinations and those of the external genitalia) in competent awake patients require explicit consent. This can be verbal but should be documented in the patient's notes. It is essential that there should be no possibility for the consent to have any element of coercion (eg, it may make it harder for a patient to refuse if the patient is asked after undressing or in front of student).

Principle 14

Sensitive examinations under anesthesia require formal written consent obtained in advance and signed by the patient. It is essential that there should be no possibility for the consent to have any element of coercion (e.g. asking in front of a student may make it harder for a patient to refuse). Without such consent, a student cannot undertake such activity).

Bagg W, Adams J, Anderson L, et al. Medical Students and informed consent: A consensus statement prepared by the Faculties of Medical and Health Science of the Universities of Auckland and Otago, Chief Medical Officers of District Health Boards, New Zealand Medical Students' Association and the Medical Council of New Zealand. *N Z Med J*. 2015;128(1414):27-35. Published 2015 May 15.

** the Medical council of New Zealand consider as a SEXUAL IMPROPRIETY:

- performing an intimate examination in the presence of trainees without obtaining the patient consent for the students' observation.
- Undertaking an intimate examination without the patient consent.
- Sexual impropriety is defined according to the council as any act that sexually disdains the patient.

https://www.mcnz.org.nz/assets/standards/3f49ba8048/Sexual-boundaries-in-the-doctor-patient-relationship.pdf

(3) California law:

> A physician and surgeon or a student undertaking a course of professional instruction or a clinical training program, may not perform a pelvic examination on an anesthetized or unconscious female patient unless the patient gave informed consent to the pelvic examination, or the performance of a pelvic examination is within the scope of care for the surgical procedure or diagnostic examination to be performed on the patient or, in the case of an unconscious patient, the pelvic examination is required for diagnostic purposes.

California Code, Business and Professions Code - BPC § 2281, 2017

(4) Recommendations by the Association of Professors of Gynecology and Obstetrics:

The Association of Professors of Gynecology and Obstetrics suggests the following perspectives to document the patient consent for student involvement in non-anesthetized and anesthetized pelvic examinations:

- Non-anesthetized pelvic examination:

> • Adding checkboxes to medical record templates.
>
> • Adding a line within progress notes in electronic medical record templates.
>
> • A sticker—similar to a "time out" sticker—affixed to paper medical records indicating that the patient agreed to pelvic examination by a student.

- Pelvic examination under anesthesia:

- Supplemental consents for student examination under anesthesia (similar to refusal of blood products consent forms). - Stickers on the main consent form attesting that discussion of examination under anesthesia was done and consent obtained (similar to "time out" documentation stickers). - Including the term "exam under anesthesia" preceding the surgical procedure on consent forms (e.g. "exam under anesthesia, laparoscopic salpingectomy" on the procedure line of a consent form rather than simply "laparoscopic salpingectomy") to complement language already common to surgical consent forms regarding student involvement. - Examination under anesthesia within the surgical consent form. - Inclusion of an item on preinduction checklists con- firming whether the patient consented to examination under anesthesia by learners.

Hammoud MM, Spector-Bagdady K, O'Reilly M, Major C, Baecher-Lind L. Consent for the Pelvic Examination Under Anesthesia by Medical Students: Recommendations by the Association of Professors of Gynecology and Obstetrics. *Obstet Gynecol*. 2019;134(6):1303-1307. doi:10.1097/AOG.0000000000003560

See page: 108

Appendix 2 : Medical students' initiatives in regard of interactions with pharmaceuticals' industries

(1) American medical students' association (AMSA):

The association inaugurated the PharmFree campaign in 2002 to raise medical students' awareness about the impact of drug industries on medical training. The campaign started as an educational campaign in tandem with No Free Lunch and Healthy Skepticism organizations. To acquire membership of the initiative, it is required to sign the pledge of the campaign, thereafter, members were offered PharmFree accessories, inter alia, pens and badge holders. This campaign encompasses different measures, namely:

- Collaboration with the Medical Letter:

It is a non-profit peer-reviewed organization which provides critical assessment of novel drugs by industry-independent authors.

- National PharmFree day:

The association launched the PharmFree Day on December 8, 2004 where members of the association organize educational discussions, reuse pharmaceutical advertisements in medical journals and remit them to editors, interchange PharmFree paraphernalia, and stick PharmFree labels on all industries' logos in hospitals.

- Comprehensive conflict-of interest policies:

This initiative aims to aid medical students to formulate and establish vigorous policies in respect of the interaction with industries in their medical schools. The association developed the Scorecard to appraise medical colleges' policies regarding the issue of conflict of interest.

- PharmFree Curricula:

It is a project that aims to help medical colleges to address in their educational programs the issues related to conflicts of interest.

- Second Slide Campaign:

It is a project that recommend medical schools to establish guidelines about the disclosure of faculty members' conflicts of interest to students.

The AMSA PharmFree Pledge

"I am committed to the practice of medicine in the best interests of patients and to the pursuit of education that is based on the best available evidence, rather than on advertising or promotion. I, therefore, pledge to accept no money, gifts, or hospitality from the pharmaceutical industry; to seek unbiased sources of information and not rely on information disseminated by drug companies; and to avoid conflicts of interest in my medical education and practice."

https://doi.org/10.1371/journal.pmed.0030030

The PharmFree Sticker

DOI: 10.1371/journal.pmed.0030030.g001

Moghimi Y (2006) The "PharmFree" Campaign: Educating Medical Students about Industry Influence. PLoS Med 3(1): e30.
https://doi.org/10.1371/journal.pmed.0030030

AMSA PharmFree – The Campaign/Initiatives
https://www.pharmfree.org/campaign?id=0002

(2) Australian medical students' association (AMSA):

It establishes policy documents that encompass the points of view and reflections of Australian medical students in respect of the issues that affects them. These documents are written in the light of the salient literature about the matters of interest.

Policy document about the pharmaceutical sponsorship

and relationship with industries

AMSA 2018

AMSA calls upon:

⇨ **The AMSA Executive and its subcommittees, including but not limited to events and sponsorship teams**, to:

- Be open and transparent with members and medical students about all sponsorship received.
- Not accept sponsorship, or enter into partnership arrangements with, pharmaceutical companies.
- Cautiously consider sponsorship, or entering into partnership arrangements with medical device companies, where there is a reasonable basis to believe that there could be an association between the sponsorship or agreement and the medical devices produced by that company;
  - In the first instance, the Executive should interpret the background to this policy in determining if a company falls into this classification, with regard to the products produced, their listing with relevant bodies and use in Australian prescribing.
  - Where it is unclear if a company falls under the definition of pharmaceutical or medical device company, the Executive should refer the matter to the members for consideration.
- Continue informing themselves about measures taken by other medical schools, student organizations or other professional bodies, both domestically and internationally, which may be relevant for Australian medical students. These would include:
  - Measures in raising awareness about conflicts of interests arising from interactions with pharmaceutical industries and medical device companies.
  - Policy and measures addressing and preventing potential conflicts of interests.
  - Evidence of this awareness through AMSA publications and/or the introduction of initiatives to enhance awareness of industry influence for its members.

⇨ **Medical student societies:**

- Take all reasonable steps to cease any pre-existing sponsorship or partnership

arrangements with pharmaceutical companies in a timely manner.

- Closely reconsider pre-existing sponsorship or partnership arrangements with medical device companies in a timely manner.
- Not accept sponsorship, or entering into partnership arrangements with, pharmaceutical companies.
- Cautiously consider sponsorship or partnership arrangements with medical device companies, where there is a reasonable basis to believe that there could be an association between the sponsorship or agreement and the pharmaceuticals or medical devices produced by that company.
- Make it an ongoing priority to inform itself about any measures to raise awareness of and address the issue of potential conflicts of interest arising from medical students and medical professionals interacting with the pharmaceutical and medical devices companies and consider whether they may be applicable for medical students in Australia.
- Advocate to their respective medical schools regarding the importance of educating medical students about the evidence of the potential negative effects of interactions and the risks of conflict of interest associated with pharmaceutical and medical device companies.
- Take all reasonable steps to raise awareness among medical students regarding the evidence of the potential conflicts of interest which can arise from interactions with pharmaceutical and medical device companies and advice for managing such conflicts and raising awareness about options for locating independent medical information.

⇨ **Australian medical schools to:**

- Ensure that medical students receive comprehensive education regarding conflicts of interest, consistent with requirements in the AMC standards, including:
  - Quality, up-to-date, unbiased and evidence-based teaching on medical devices, pharmaceuticals and prescribing.
  - Evidence-based teaching on the legal framework surrounding pharmaceutical and medical device marketing and its impact on prescribing.
  - Skill teaching regarding critical appraisal and sourcing of independent evidence;
  - An overview of drug development and approval;
- Ban formal education given by pharmaceutical and medical device companies at medical schools.
- Ensure students are not penalized for non-attendance at any educational or other university organized sessions provided by industry.
- Refuse to accept sponsorship or donations from industry that is not for the purpose of research.
- Declare all funding from industry annually.

⇨ **Australian medical students** to, over the course of their training:

- Develop a nuanced understanding of the role of industry in modern medical

practice.

- Carefully consider decisions about event attendance, scholarship acceptance and involvement in industry-sponsored research.
- Exercise their right to non-attendance of industry-sponsored events, if desired.

⇨ **Representative groups for medical professionals,** including the Australian Medical Association (AMA), to:

- Ensure all relationships with industry are ethical, compatible with best practice and not biased by conflict of interest.
- Not accept and encourage their members not to accept gifts, sponsorship, compensation for services and research funding from industry.
- Make publicly available records of all donations, sponsorships, remunerations and gifts from industry to the representative groups including.
- Minimize prescription bias to the best of their ability in line with recent evidence.
- Encourage their members to seek education on pharmaceuticals and medical technologies from unbiased, peer reviewed publications rather than company representatives.
- Promote a structured education program for relationship with industry, in line with AMC guidelines, to be implemented in medical schools.

⇨ **AMSA members** reserve their right to request further information about the nature of any and all sponsorship or partnership agreements. The members may from time to time set additional standards to support the language of this document insofar as doing so contributes to the company's public policy objectives.

Australian Association of Medical Students, Official Policy
https://www.amsa.org.au/node/943

Appendix 3 : About informed consent:

The concept of informed consent has been developed within the framework of medical ethics and law. Its essence revolves around the idea that any decision to be made related to medical care ought to be taken jointly by the patient and the physician. Informed consent entails both legal and ethical responsibility.

The World Medical Association (WMA) Declaration on the Rights of the Patients

> The patient has the right to self-determination, to make free decisions regarding himself/herself. The physician will inform the patient of the consequences of his/her decisions. A mentally competent adult patient has the right to give or withhold consent to any diagnostic procedure or therapy. The patient has the right to the information necessary to make his/her decisions. The patient should understand clearly what is the purpose of any test or treatment, what the results would imply, and what would be the implications of withholding consent.

World Medical Association
Medical Ethics Manual
Third edition 2015

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- *Je traiterai mes maîtres avec le respect et la reconnaissance qui leur sont dus.*
- *Je pratiquerai ma profession avec conscience et dignité. La santé de mes malades sera mon premier but.*
- *Je ne trahirai pas les secrets qui me seront confiés.*
- *Je maintiendrai par tous les moyens en mon pouvoir l'honneur et les nobles traditions de la profession médicale.*
- *Les médecins seront mes frères.*
- *Aucune considération de religion, de nationalité, de race, aucune considération politique et sociale ne s'interposera entre mon devoir et mon patient.*
- *Je maintiendrai le respect de la vie humaine dès la conception.*
- *Même sous la menace, je n'userai pas de mes connaissances médicales d'une façon contraire aux lois de l'humanité.*
- *Je m'y engage librement et sur mon honneur.*

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