 doi:10.20944/preprints202205.0126.v1

Article

Medical Education: Patients' Perspectives on Clinical Training and Informed Consent

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Abstract: There are complex ethical dilemmas inherent in medicine teaching, particularly in clinical practice involving actual patients. Questions must be raised on fulfilling medical students' training needs while still respecting patients' fundamental rights to autonomy and privacy. We aimed to assess patients' perspectives regarding medical students' involvement in their medical care. An observational, cross-sectional study was developed, and an interview-like questionnaire was applied randomly to patients waiting for a consult/admitted to three distinct departments: General Surgery, Obstetrics/Gynaecology, and Infectious Diseases. Of the 77% interviewed patients who reported previous experiences with medical students, only 59% stated that they were asked for consent for their participation and 28% that students had adequately introduced themselves. Patients from Gynaecology/Obstetrics were the ones who reported lower rates of these practices and were also the ones who were most bothered by students' presence, stating that they would refuse students' participation in the future. Male patients received more explanations than female patients regarding the same matters. 35% of patients stated they would feel more comfortable without the medical students' presence. The study shows a need to pay closer attention to fulfilling patients' fundamental rights.

Keywords: medical education; medical ethics; autonomy; patients' perspectives

1. Introduction

Although vast in various topics, medical education literature lacks substance relating to ethics in medical education, especially on medical clinical training involving actual patients or the ethical issues implied [1].

As future doctors, medical students have to go through a complete formal education and demanding training process even before they are qualified as medical doctors. Medical education constitutes a need for society, and it is for its greater good that students have to endure the complex process; however, it can present as harmful to some individuals, particularly those pursuing medical care as patients. It constitutes a series of ethical dilemmas and professional demands that must be carefully identified and adequately addressed.

Bedside teaching constitutes an essential tool and a substantial part of medical teaching in medical schools worldwide. It comprises critical learning opportunities for students to learn directly from their attending physicians, acquire clinical knowledge, improve their clinical thinking, and obtain and develop communication and other soft skills. It plays a vital role in making decisions and facing ethical issues and challenges. This teaching method is widely accepted by medical students, trainees and doctors [2], but what do patients think?

For a long now, it has been of common knowledge the existence of complex ethical dilemmas inherent to the practice of medicine and, as so, to the teaching of medicine,

 doi:10.20944/preprints202205.0126.v1

particularly when it comes to the clinical practice involving patients. There has been a constant concern about correctly approaching and responding to these quandaries. The main questions have been the protection of patients' privacy and confidentiality and the practice of ethical medicine and medical education.

Medical ethics guides the practitioners in their everyday decision-making, being of the utmost importance to respect its principles, namely patients' autonomy [3]. In an era where patient-centred medicine has become a staple, the principle of autonomy, i.e. the right to self-determination, has become the central ethical principle in healthcare.

As important as it may be, medical students' presence is not essential to providing patients with medical assistance, and it contradicts their expectations to be seen by actual practicing doctors. The responsible physician must explain the situation to the patients, point out the advantages and possible inconveniences, and ask them for consent. Patients are free to accept or refuse medical students' participation, and it is their fundamental right to be aware of and questioned for consent on the matter [4].

When attending a teaching hospital in Portugal, it is expected that patients know there is a possibility they will be asked if they allow medical students to participate in their medical care. Portuguese law states that every intervention relating to someone's health should only be performed after consent [5]. Codes of conduct and ethical practice specifically designed for medical students exist, and students are expected to act accordingly. However, not all patients are fully aware of their rights, and proper consent is not always pursued.

After the classical model of paternalist medicine declined, there was a power shift from the doctor to the patient. The doctor now plays an essential role in ensuring that patients are enabled to make decisions regarding their medical care. Central to autonomy is informed consent, which is intimately related to the teaching of medicine and bedside teaching [6].

An attempt was made to supplement students' needs in ethics; alone or in association with the humanities, medical ethics became part of the curriculum of essentially every medical school [7,8].

Making ethical decisions and choices constitutes an indispensable part of being a good doctor. It starts with each one's individual ethical and moral values - which influence the decisions being made - but ethics is also taught, and the better the students' primary ethical education and contact with ethical challenges, the better they can appreciate the different nuances and complexities of medical ethical choices [9].

It might be challenging to separate the practice of ethical medicine from each individual's deeply rooted moral values. However, although they are invariably connected, teaching ethics as an integrating part of the medical curriculum is not a character-building attempt. It should be perceived as the teaching of skills thought to enable students to identify, analyse, and resolve ethical dilemmas in patient care situations [10].

Despite the growing concern with complementing medical students' programmes in the medical ethics area, particularly the need to implement them before they initiate their clinical rotation, studies have pointed out that medical students tend to become less and less affected by the ethical dilemmas they face throughout their medical formation. Basic ethical norms such as introducing themselves to the patients as medical students or requesting their consent before history taking or physical examination are forgotten or ignored [11].

Patients' participation in medical education should be informed and voluntary, being that every person has the right to refuse it. Previous studies have pointed out that one of the biggest motivators for patients' acceptance of students' participation in their medical care is an aspiration to contribute to their education. The most common reason for refusal is the concern about their privacy not being respected. Most patients show a positive attitude towards medical students' participation as long as they are informed of students' presence and asked for their consent beforehand. The medical specialty in question has also been shown to influence findings; for instance, results have pointed out that obstetrics

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and gynaecology and surgery patients are less likely to accept students than patients in general practice [12].

As good clinical skills are essential for the best medical practice and require as much patient-exposure as possible to be developed, questions must be raised on how to fulfil medical students' training needs as future doctors while still respecting patients' fundamental rights, and autonomy and privacy [3]. These issues are particularly pressing when it comes to invasive, uncomfortable and intimate procedures such as gynaecological examination or invasive procedures, as patients are more inclined to refuse the presence/participation of medical students [13].

When faced with this ethical dilemma, the questions we pose are: what are patients' perspectives on their involvement in medical education? Is the presence of medical students a stress factor for patients, or do they feel integrated and willing to participate in their medical formation? Is their medical care being affected? Are their rights being disrespected?

This study intended to answer these questions by evaluating the impact the presence and participation of medical students have on patients' quality of care from their point of view. We aimed to assess whether there was the need to implement further measures to regulate student-patient interactions or intervene at an earlier stage of their medical formation.

2. Materials and Methods

2.1. Study Design and Participants

This study was conducted over one month at a central University Hospital in Porto, Portugal, the largest hospital unit in the north region and one of the biggest in the country. It constitutes a highly specialised reference centre, counting 1062 acute care beds, 43 cribs, 14 beds for admission to the Physical Rehabilitation department, 32 operating rooms, five birthing rooms, 252 consulting rooms and 135 chairs or beds day hospital. Every day about 15000 to 20000 patients visit its facilities. An observational, cross-sectional study was developed, and an interview-like questionnaire was applied. The data collection period was between January 2019 and March 2019.

The ethical procedures were out following the Helsinki Declaration, whereby the Ethics Committee of the São João hospital complex analysed and approved the study (ref.366/18). All participants gave their informed consent.

The sample consisted of 131 patients interviewed in three different hospital departments - General Surgery, Infectious Diseases and Obstetrics/Gynaecology. Most patients were interviewed while waiting for a scheduled consult, and 39% while admitted to one of the previously mentioned departments. Interviewed patients were an average age of 49 years old. Of the 131 patients, more than half were female, and most patients were married. Only 21% of patients had completed higher education (equivalent to a college degree) (Table 1).

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Table 1: Sociodemographic and other characteristics of the study population (*n* =131).

Age *mean (standard deviation)*	49	(16)
Location *n (%)*		
Consult	80	(61)
Admission	51	(39)
Department *n (%)*		
General Surgery	63	(48)
Infectious Diseases	35	(27)
Obstetrics/Gynecology	33	(25)
Gender *n (%)*		
Male	54	(41)
Female	77	
Civil status *n (%)*		
Single	30	(23)
Married	76	(58)
Widowed	4	(3)
Divorced	11	(8)
Civil union	10	(8)
Education *n (%)*		
1 to 4 years	46	(35)
5 to 12 years	57	(44)
Higher education	28	(21)

2.2 Survey Questionnaire

An interview-like questionnaire (Appendix 1) was applied randomly to patients waiting for a scheduled consult or admitted to three distinct departments: General Surgery, Obstetrics/Gynaecology, and Infectious Diseases. The same investigator conducted all interviews. A total of 131 patients were interviewed after being appropriately informed of the study's objectives and contents and obtaining consent. Minors (less than 18 years of age) and/or individuals unable to provide consent were excluded from the study. Patients were asked to supply demographic information, i.e., age, civil status and education level; and to answer some specific questions, i.e., whether a medical student had ever been present during their previous visits to health care institutions, followed by a series of closed - yes or no - questions on their perceptions on medical students' involvement in their health care. Questions were constructed based on the most common issues found in the literature. Only patients with past experiences involving medical students answered the totality of the questions, being that the others provided only demographic information.

232. Statistical Analysis

The Chi-Square Test was used to compare patients' responses according to the three different departments where interviews were conducted and patients' level of education. The mean age of patients who answered affirmatively and negatively to each question was analysed using Independent Sample T-Test.

A database was created based on the obtained answers, and data were analysed using Statistical Package for Social Sciences (SPSS). A p-value <0,05 was considered the cut-off value for statistical significance.

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3. Results

Of the 131 interviewed patients, only 101 (77%) reported previous experiences where medical students had been present in a consult and/or admission context. Patients reported a median of 3 medical students presence, with a minimum of 1 and a maximum of 12 students. None of the enquired patients reported any situation where a student had been disrespectful towards them.

Only 59% of the patients with previous experiences regarding medical students' involvement in their medical care reported that the physician asked them if the students could be present, and only 28% stated that the doctor introduced the students by name and with their year of medical formation. The department from which the interviewed patients came was significantly associated with the patients' responses, being that patients interviewed in the Obstetrics/Gynaecology department were the ones who reported a more negligible incidence of these practices. In contrast, patients interviewed in the Infectious Diseases department had a higher rate of affirmative answers to these questions ($p=0.006$ and $p=0.001$, respectively) (Table 2).

About a fifth of the patients stated that they felt uncomfortable with the students' presence, and the department from which the interviewed patients came was significantly associated with this feeling ($p=0.002$) since patients mainly reported it from Obstetrics/Gynaecology (Table 2).

Only about half of the patients stated that the medical students introduced themselves as students and asked for their consent previously for history taking or physical examination. A similar percentage that they explained the procedures they were going to perform while addressing patients' doubts and questions. The department in which patients gave a lower rate of affirmative answers to these questions was Obstetrics/Gynaecology, with only 30% of patients stating that medical students introduced themselves and asked for consent and 27% reporting that they explained what they wanted to do and clarified their doubts ($p=0.004$ and $p<0.001$, respectively). The department with the most affirmative answers was Infectious Diseases.

Forty-one per cent of the interviewed individuals said that if the problem in question-related to a more intimate part of their body, they would feel more bothered by the presence of medical students. Once again, the department from which the interviewed patients came was significantly associated with patients' responses ($p=0.008$), and the department in which patients expressed this feeling the most was also Obstetrics/Gynaecology (Table 2).

Thirty-five per cent of patients declared that they would feel more comfortable without the presence of medical students. This percentage was the highest amongst Obstetrics/Gynaecology patients (53%) and the lowest among those from Infectious Diseases (19%).

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Table 2: n (%), of answers to the questions regarding the presence of medical students on a previous consult and/or admission according to the department where the interview took place.

		Department in which the interview took place			
	Total n=101	**General surgery** n=44	**Infectious Disease** n=27	**Obstetrics/ Gynecology** n=30	**p**
The doctor asked me if the students could be present.	60 (59)	26 (59)	22 (82)	12 (40)	**0.006**
The doctor introduced the students with their name and year of formation.	28 (28)	9 (21)	15 (56)	4 (13)	**0.001**
I felt uncomfortable with the students' presence.	19 (19)	4 (9)	3 (11)	12 (40)	**0.002**
The students introduced themselves as medical students and asked for my consent to collect my medical history/perform the medical examination.	51 (51)	22 (50)	20 (74)	9 (30)	**0.004**
The students explained the procedures they wanted to perform and clarified any doubts I might have had.	45 (45)	15 (34)	22 (82)	8 (27)	**<0.001**
When there are medical students present I feel like I receive a better explanation about my condition/illness.	20 (20)	12 (27)	5 (19)	3 (10)	0.184
I feel satisfied to contribute to the medical students' formation.	100 (99)	43 (98)	27 (100)	30 (100)	0.520
In case the problem was in a more intimate part of my body I would feel more bothered by the medical students' presence.	41 (41)	15 (34)	7 (26)	19 (63)	**0.008**
I'm afraid to reveal an intimate problem in the presence of a student.	37 (37)	15 (34)	8 (30)	14 (47)	0.369
If I could choose, I would feel more comfortable without the presence of medical students.	35 (35)	14 (32)	5 (19)	16 (53)	**0.019**

Table 3 describes the answers given by the interviewed patients according to their level of education (years of school attendance), which revealed that there was only a significant association with the difficulty of disclosure of an intimate problem by the patients in the presence of medical students. 71% of the patients with a higher education stated that it would be more difficult for them to reveal/talk about an intimate problem in the presence of students, while only 28% of patients who completed four years or less of school and 27% of those who completed between 5 and 12 years of school responded affirmatively to that question (p=0.001).

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Table 3: n (%), of answers to the questions regarding the presence of medical students on a previous consult and/or admission according to the level of education.

		Years of school attendance			
	Total	1 to 4 years	Between 5 and 12 years	Higher eductation	p
	n=101	n=44	n=27	n=30	
The doctor asked me if the students could be present.	60 (59)	17 (53)	28 (58)	15 (71)	0.406
The doctor introduced the students with their name and year of formation.	28 (28)	9 (28)	16 (33)	3 (14)	0.266
I felt uncomfortable with the students' presence.	19 (19)	3 (9)	9 (19)	7 (33)	0.092
The students introduced themselves as medical students and asked for my consent to collect my medical history/perform the medical examination.	51 (51)	20 (63)	23 (48)	8 (38)	0.196
The students explained the procedures they wanted to perform and clarified any doubts I might have had.	46 (45)	12 (38)	23 (48)	10 (47)	0.624
When there are medical students present I feel like I receive a better explanation about my condition/illness.	20 (20)	6 (19)	9 (19)	5 (24)	0.875
I feel satisfied to contribute to the medical students' formation.	102 (99)	32 (100)	47 (98)	21 (100)	0.573
In case the problem was in a more intimate part of my body I would feel more bothered by the medical students' presence.	41 (41)	9 (28)	20 (42)	12 (57)	0.107
I'm afraid to reveal an intimate problem in the presence of a student.	37 (37)	9 (28)	13 (27)	15 (71)	**0.001**
If I could choose, I would feel more comfortable without the presence of medical students.	35 (35)	11 (34)	15 (31)	9 (43)	0.647

Patients' acceptance of and perspectives regarding students' involvement was also found to be significantly associated with their age. Patients who felt discomfort with students' presence were significantly younger than those who didn't (p=0.006). Younger patients were also the ones who said they would feel more bothered by the students' presence in case the problem in question was located to a more intimate part of their bodies (p=0.014). On the other hand, patients who reported having been asked for consent by students who introduced themselves as such were significantly older than those who stated otherwise (p=0.017) (Table 4).

Given that only female patients were interviewed from the Obstetrics/Gynaecology department and patients interviewed from the Infectious Diseases department were mainly male, a gender comparison was only possible between patients from the General Surgery department. There was a significant difference between students' conduct regarding male and female patients; namely, when present in a setting of consult or admission, students explained the intended procedures and clarified patients' doubts to more than

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half of the male patients (56%), but that was only the case for less of a quarter (19%) of the female patients (p= 0.012).

Table 4: mean (standard deviation), of the age of the inquired patients who answered affirmatively or negatively to the questions about the presence of medical students on a previous consult and/or admission.

	NO mean (sd)	YES mean (sd)	p
The doctor asked me if the students could be present.	50 (17)	48 (15)	0.604
The doctor introduced the students with their name and year of formation.	48 (16)	52 (14)	0.217
I felt uncomfortable with the students' presence.	51 (15)	41 (16)	**0.006**
The students introduced themselves as medical students and asked for my consent to collect my medical history/perform the medical examination.	46 (17)	53 (14)	**0.017**
The students explained the procedures they wanted to perform and clarified any doubts I might have had.	51 (15)	47 (16)	0.248
When there are medical students present I feel like I receive a better explanation about my condition/illness.	49 (16)	50 (13)	0.758
I feel satisfied to contribute to the medical students' formation.	53 (15)	45 (16)	**0.014**
In case the problem was in a more intimate part of my body I would feel more bothered by the medical students' presence.	50 (15)	47 (17)	0.363
I'm afraid to reveal an intimate problem in the presence of a student.	50 (14)	47 (19)	0.586
If I could choose, I would feel more comfortable without the presence of medical students.	50 (17)	48 (15)	0.604

sd: standard deviation

4. Discussion

Patients' perspectives regarding medical students' involvement in their medical care vary according to different aspects of their previous experiences. Only a little over half of our participants stated that their doctors asked them if the students could be present, and an even smaller percentage said that their doctors had introduced the students correctly. These results were in accordance with those obtained by previous studies [14,15], in which a considerable percentage of patients estimated having had previous experiences with medical students' participation without being informed or asked for consent. This, of course, represents a blatant disrespect regarding patients' autonomy, and as the teacher often represents a role model, students may be instilled with values that perpetuate ethically dubious attitudes [14]. Aside from educating medical students in the humanities and medical ethics, providing clinical teachers with the adequate formation and other tools to assure appropriate guidance of their students might be the key to educating future more sentient doctors.

Patients interviewed from the Obstetrics/Gynaecology department were the ones who reported the most negligible incidence of adequate consent practices being applied and also the ones who stated they would feel more comfortable without the students' presence. This can be explained by the sensitive nature of the medical speciality itself since

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it requires a more significant invasion of the patients' privacy, which has been shown to affect patients' willingness to accept medical students' participation [2] and also because the current process regarding this medical speciality seems to rely on presumed consent instead of an informed one and the active decision of permitting students' presence and participation, even though good ethical practices consist of adequately informing the patient, asking for their consent for specific situations and procedures, and allowing them to refuse [3,14]. As so, patients might feel offended and stripped of their dignity in the absence of an adequate consent process, which may come as an obstacle for them even to understand the purpose of the students' presence, therefore rejecting their participation. Patients' willingness to accept medical students' participation in the future might be affected, and no clinical contact in Obstetrics/Gynaecology would result in a critical gap in students' medical education.

Previous research has shown that receiving the appropriate information and the opportunity to deny students' participation plays an essential role in patients' comfort levels and willingness to accept [14]. In accordance, our results show that patients who were not asked for their consent are the ones who would refuse student participation in the future. On the contrary, patients who reported having been informed and asked for consent were also the ones who would be willing to accept students' participation again. There is a critical need for clinical teachers and others to ensure adequate measures to inform patients and seek active consent about their involvement in medical teaching [15,16]. The study also showed that there is sometimes an excessive number of students present in the room, being that patients reported numbers as high as twelve. An adequate number of students for every specific situation should also be sought. It should be a requirement to avoid an excessive number of people – particularly in more delicate situations, i.e. in a gynaecological examination - assuring patients' comfort.

Patients' level of education was also found to have a significant association with the discomfort felt in the presence of students; namely, patients with higher education were the ones who expressed the most fear of revealing an intimate problem if students were present. Patients with a higher level of education might be more aware of their rights and, as so, might be more offended by students' presence in the setting of an intimate problem if adequate information about their role was not provided and consent was not requested.

Literature on the matter points out that elderly patients tend to accept students' participation more often without being informed [14]. However, our study showed that consent was requested from older patients more often than from younger ones. In accordance, our results also show that younger patients were the ones who expressed having felt uncomfortable with the students' presence the most and the ones who would feel most bothered by students' participation in case their condition involved private parts of their bodies. Once again, being adequately informed and asked for consent seems to play an essential role in patients' acceptance, but higher refusal rates from younger patients might also possibly be explained by a better knowledge of their rights than older ones. Further, a lesser difference in age between patients and the students might be another possible contributor.

Patient gender was also found to be significantly associated with patients' responses, being that more than half of the male patients stated that they received an adequate explanation and had their doubts clarified regarding the procedures performed by students, while this was only the case for less than a quarter of female patients. Literature also shows that women are not offered the same treatment as men [17]. Despite all efforts to fight gender bias, this result might directly reflect a cultural situation perpetuating gender inequality.

Almost every patient said that they felt satisfied to be contributing to medical students' education and every single one stated that none of the students was disrespectful on any occasion. However, there are still patients who felt bothered by their presence and patients who would choose not to participate. The explanation to why that happens might

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reside in the fact that adequate information was not provided, and proper consent was not obtained, resulting in an uncomfortable situation for the patients in a place where they are already vulnerable. It is a duty to ensure that does not happen as medical professionals.

Interviews were not conducted on patients admitted to the Infectious Diseases department due to the infection risk. Since the same norms apply to medical students, which are not permitted to visit these patients as a part of their clinical training, we estimate that results were not affected.

Ethics has been an integrating part of the medical curriculum in medical schools worldwide since the beginning of the XX century; however, given its theoretical nature, it is not easy to define the curricular goals in this field. Literature provides us with the foundations for the ideal medical ethics curriculum, asserting that the teaching of medical ethics should go significantly beyond sensitising medical students to the identifiable ethical problems in medicine. Furthermore, it should provide students and physicians with the conceptual moral-reasoning and communication skills to successfully deal with most moral issues and ethical dilemmas that might arise from their daily clinical practice. It should address the clarification of central notions and concepts (such as the patients' role in their medical care and what it means for them to have the right to autonomy in their medical decisions), the acquisition of essential decision-making tools, and the ability to apply them to actual practical cases. Also crucial is the development and training of communication and interaction skills; previous studies have been conducted on skills-oriented educational interventions as a possible way to improve students' knowledge, skills and attitudes [18].

Quoting the 1985 DeCamp Report [19], "a medical-ethics curriculum is designed not to improve the moral character of future physicians but to provide those of sound moral character with the intellectual tools and interaction skills to give that moral character its best behavioural expression".

In this study, we had limitations. This study was carried out in one hospital, and only a small number of patients participated in the study. Further multicentric studies with larger populations are needed to confirm the results.

5. Conclusions

Given the results of this study, it was possible to verify that the attitude of the medical team is thoroughly far from what is expected. Informed consent is an ethical, deontological and legal duty for any intervention which aims to protect the patient's self-determination, recognised in the various legal and deontological norms.

The absence of valid informed consent constitutes a violation of good medical practice, and the responsible physician's disciplinary, civil or criminal liability may be invoked.

In conclusion, even though we are at a time when people are more and more informed and when current medical practice consists of a patient-oriented clinical practice, guided by patients' wills and needs, evidence suggests that medical education's current practice does not always agree with adequate respect for patients' autonomy. Patients' rights continue to be disrespected. Patients are an essential part of clinical training, and they might be or grow to be less accepting of medical students' participation due to inadequate behaviour by both students and their teachers. Ethical values are fundamentally embedded in medicine and must be obliged; there is an obvious need to implement measures that provide medical professionals with the tools to deal with the ethical dilemmas they face every day adequately. Even though medical ethics is part of the formal medical curriculum, there is a need to intervene and supply medical students with adequate knowledge of ethical values and fair clinical practices, which might mean that ethics teaching may need to be altered to adapt to medical students' growing needs in the field.

There is also a need to provide them with well-trained clinical teachers who can serve as educators and role models.

Author Contributions: IS contributed to the data curation, writing – original draft, Writing – review & editing. ID to the conceptualisation, methodology, Writing – review & editing, supervision, project administration and funding acquisition. CS contributed formal analysis, writing - review & editing. All authors read and approved the final manuscript.

Funding: This article was supported by National Funds through FCT—Fundação para a Ciência e a Tecnologia, I.P., within CINTESIS, R&D Unit (reference UIDB/4255/2020).

Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by an independent Ethical Committee, the Ethics Committee of São João Center (ref. 366 /2018).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The corresponding author can obtain the exact data.

Acknowledgements: The authors are grateful to the patients who dedicated their time and effort to this study.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Thirumoorthy, T. The Ethics of Medical Education – The Ethical and Professional Issues in Teaching and Learning Medicine. *Ann Acad Med Singapore*. **2017**, 46, 331-2.
2. Marwa, Y.; Al-Saddique, M.; Hassan, A.; Karim, J.; Al-Saleh, M. Are medical students accepted by patients in teaching Hospitals? *Medical Education Online*. **2012**, 17, 1-13. doi.org/10.3402/meo.v17i0.17172
3. Beauchamp, T. Informed Consent: Its History, Meaning, and Present Challenges. *Cambridge Quarterly of Healthcare Ethics*, **2011,** 20, 515-523. doi:10.1017/S0963180111000259
4. Prof. Doutor Guilherme de Oliveira & Mestre André Dias Pereira. *Consentimento Informado*. Centro de Direito Biomédico: Coimbra; **2006**; pp.109-113.
5. Council of Europe. The European Convention on Human Rights and Biomedicine.**1997.** Accessed April 18, 2022. https://rm.coe.int/168007cf98
6. Kent, GG. The role of psychology in the teaching of medical ethics: the example of informed consent Medical Education. **1994**, *Medical Education*. 28:126-31. doi.org/10.1111/j.1365-2923.1994.tb02531.x
7. Pellegrino, ED. The Humanities and Human Values in Medical Schools, a Ten-Year Overview. Society for Health and Human Values. **1982**; pp.1-40.
8. Bickel, J. Human values teaching programs in the clinical education of medical students. *J Med Educ*. **1987**;62(5):369-378. doi:10.1097/00001888-198705000-00001
9. Pellegrino, ED. Teaching medical ethics: some persistent questions and some responses. *Acad Med*. **1989**;64(12):701-703. doi:10.1097/00001888-198912000-00002
10. Hafferty, FW.; Franks, R. The Hidden Curriculum, Ethics Teaching, and the Structure of Medical Education. *Academic Medicine*. **1994**;69(11):861-71. doi: 10.1097/00001888-199411000-00001
11. Silver-Isenstadt, A.; Ubel, PA. Erosion in Medical Students' Attitudes About Telling Patients They Are Students. *J Gen Intern Med*. **1999**;14:481-7. doi: 10.1046/j.1525-1497.1999.09298.x
12. Vaughn, JL. Patients' Attitudes Toward Medical Student Participation Across Specialties: A Systematic Review. *Teach Learn Med*. **2015**;27 (3):245–53. doi: 10.1080/10401334.2015.1044750
13. Hartz, M.; Beal, J. Patients' Attitudes and Comfort Levels Regarding Medical Students' Involvement in Obstetrics–Gynecology Outpatient Clinics. *Acad Med*. **2000**;75(10):1010-4. doi: 10.1097/00001888-200010000-00018
14. Lynoe, N.; Sandlund, M.; Westberg, K.; Duchek, M. Informed consent in clinical training - patient experiences and motives for participating. *Med Educ*. **1998**;32:465-71. doi: 10.1046/j.1365-2923.1998.00237.x

15. O'Flynn, N.; Rymer, J. Consent for teaching: the experience of women attending a gynaecology clinic. *Med Educ*. **2003**;37:1109–14. doi: 10.1046/j.1365-2923.2003.01715.x
16. Omid A, Daneshpajouhnejad P, Pirhaji O. Medical Students' and Physicians' Attitudes toward Patients' Consent to Participate in Clinical Training. J Adv Med Educ Prof. 2015 Jan;3(1):21-5. PMID: 25587551; PMCID: PMC4291504.
17. Hamberg K. Gender bias in medicine. Women's health. **2008**;4(3):237-43.
18. Goeldlin, A.O., Siegenthaler, A., Moser, A. et al. Effects of geriatric clinical skills training on the attitudes of medical students. BMC Med Educ **2014**, 14, 233. doi.org/10.1186/1472-6920-14-233
19. Massachusetts Medical Society. Basic Curricular Goals in Medical Ethics. *The New England Journal of Medicine*. **1985**, 312:253-6.