

## **Perception of Medical Intern Students about the Gaps in Their Medical Training Related To Human Skills and Competences and the Role of Teachers and Preceptors**

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**Resumo:** A formação humanística, na medicina, é uma preocupação tanto das Universidades, quanto dos docentes e preceptores, dada sua relevância na formação completa do médico. As várias transformações que incidem sobre o ensino da medicina, fruto das mudanças sócio educacionais, evidenciam cada vez mais a necessidade de que a formação humanística seja abordada durante toda a vida acadêmica do futuro médico. O objetivo deste estudo é avaliar a percepção do interno do curso de medicina da Faculdade de Medicina de São José do Rio Preto - FAMERP sobre as lacunas em sua formação médica, em termos de habilidades e competências humanísticas. Os acadêmicos e internos de medicina reconheceram o valor e a importância da disciplina de humanidades no currículo de medicina, bem como o papel da Universidade em moldar e inculcar valores e preceitos humanísticos nos alunos, ressaltando a relevância da Universidade na formação completa do futuro médico.

**Palavras-Chaves:** humanidades médicas, educação médica, ética.

**Abstract:** Humanistic education in medicine is a concern of universities professors, and preceptors due to its relevance in the complete training of the physician. The many transformations affecting medical education because socio-educational changes have increasingly demonstrated the need for humanistic education, which should be addressed throughout the academic life of the future physician. The present study aims at evaluating the perception of the medical intern student of the Faculdade de Medicina de São José do Rio Preto - FAMERP about the gaps in their medical education regarding the humanistic skills and competences. Undergraduate medical students and medical intern students have recognized the value and the importance of the discipline of humanities in medical curriculum, as well as the role of the University in shaping and stimulating humanistic values and precepts in students, highlighting the relevance of the University in fully training the future physician.

**Keywords:** medical humanities (medical education, ethics).

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### **Introduction**

Scientific and technological advances provided by science, under the scope of instrumental reason, dedicated to the development and evoked by capitalism, have contributed to the gap of the holistic view of medicine in favor of a segmented compartmentalized medicine. This medicine began to focus on the disease and not on the individual, which implied in consequences to the medical formation: the impregnation of technical tendencies and little space for the emphasis of the humanistic aspect<sup>1</sup>.

The Cartesian model, based on technical progress, prioritized in the first place the scientific knowledge in the development of a competent medical practice and relegated the humanistic aspects to second place. However, in medicine, the humanist model redefines the good physician as a professional who holds both technical excellence and humanistic traits<sup>1</sup>.

Medical curricula had to be adapted and began to be concerned with pedagogical projects capable of promoting the teaching/learning of these humanistic traits. These projects have been trying to introduce Medical Humanities into medical curricula. This introduction has been tried around the world for the last forty years and requires increasingly new pedagogical projects.

Taking as a presupposition the Curriculum Guidelines, more specifically the profile of the former student/professional, the need for the physician's humanist education arises. These guidelines are a trigger factor

for the necessary changes in the curriculum structure. The target is the approach of relevant content areas such as doctor-patient relationship, medical vocation, "telling" bad news, medical person, the injured physician archetype, human communication, and medical professional identity, among others<sup>2</sup>.

Humanistic education is also a concern of Brazilian educators in order to train "humanized" professionals, thus, becoming a reality<sup>2</sup>. It should also be borne in mind the fact that people have different degrees of difficulty in apprehending humanistic attitudes<sup>2</sup>. This makes the role of the University and educators extremely relevant, especially of those who work in practice scenarios, because besides improving technical aspects, they should also focus the humanistic and ethical aspects as well.

For over five decades, we have sought to transcend the biomechanical model of teaching and practicing of medicine. In this period, we have developed a person-centered approach, not in the disease<sup>2</sup>. The need of humanizing the teaching of medicine is indisputable, once the current models that favor scientific technical education are not enough for a complete medical education.

It is necessary to take into account the current socio-educational model that favors speed, dynamism, diversification, impersonality, individuality, massive widespread of specialized technical training, and increased workload to meet market demand. There is no doubt that this model compromises the most humane relations<sup>3</sup>. It creates a paradox, once, while humanity is required, the impersonality and speed are privileged.

In view of the relevance of the theme, the need to develop educational researches allowing greater comprehension of how learning about humanization occurs is justified. We must look closely at the basis of actions related to humanization in health education and its importance in medical education as well.

The objective of the present study is to evaluate the perception of the medical intern student of the Faculdade de Medicina de São José do Rio Preto - FAMERP about the gaps in their medical education regarding their humanistic skills and competences. We want to investigate what this student "thinks" he has learned in terms of skills and competences. We want also to know where and at what time of course, discipline, setting, situation, etc., he "thinks" he has learned it.

### **Methodology**

In this study, a semi-structured questionnaire composed of 41 open and closed questions was used as an investigative technique of the experiential field as a possibility to obtain vivid and in-depth reports on the subject.

The subjects of this study were 121 medical intern students of both sexes from the fifth and sixth years of FAMERP medicine undergraduate course. The medical intern students from the fifth and sixth years were selected to participate in the study because they had already had enough experiences in the scenarios, both theoretical and practical teaching. Therefore, they could report their structured impressions on the subject under study. In addition, the internship corresponds to the period of closest proximity between teaching and the medical act, as well as of the construction of the professional identity and its way of acting.

The research was conducted in 2015, when the questionnaire was applied. The researcher using a virtual-learning environment designed a self-applicable questionnaire. Wix.com© is a cloud-based web development platform, where medical intern students accessed the questionnaire alone, after they have been exposed in the platform to conceptual maps on the subject as well.

The questionnaire presented statements with multiple-choice answers aiming to collect data on the importance of ethical background and humanistic principles prior to the University. In addition, we also asked questions about the role and function of humanistic education in medical school and university and the role of teachers, preceptors, and tutors in humanistic education during the first four years during the course and of the internship.

### **Statistical Analysis**

Descriptive analysis included absolute and relative frequency for categorical variables. Pearson's chi-square test or Fisher's exact test for categorical variables was performed between groups, as appropriate.

Medical intern students were grouped into two categories: "discordant" or "concordant" in order to compare questions with Likert-scale responses. Those who responded "indifferent" were excluded. All tests were two-tailed and P value <0.05 were considered as statistically significant. Statistical analysis was performed using IBM-SPSS Statistics software, version 24 (IBM Corporation, NY, USA).

### **Results**

The questionnaire was answered by 121 medical intern students, of which 74 (61%) were female.

The results were analyzed with emphasis on two aspects: (i) the perception of medical intern students in relation to humanization and (ii) the role of the professor in this context.

**Student's**

**perception in relation to humanization**

The first question was about whether humanization and humanities were synonymous. One hundred and eighty medical intern students (97.5%) said they were not. Of these, 86 (73%) also stated that humanization is a greater aspect than humanities, thus, encompassing it.

The following question was related to the medical intern student's opinion about the humanization in medical practice. The results can be seen in Table 1.

Table 1. Medical intern students' opinion regarding humanization in medical practice

The current medical practice, in general, lacks HUMANIZATION	95 (78.5%)
HUMANIZATION in medical practice has progressively advanced	23 (19%)
Current medical practice is HUMANIZED as it should be	2 (1.7%)
In medical practice, the TECHNICAL ability of the professional is much more important than HUMANIZATION	1 (0.8%)

Subsequently, medical intern students were categorized into two groups: those who believed that humanization has been advanced progressively (n=23; Group 1), and those who believed that current medical practice lacked humanization (n=95; Group 2). Some comparisons were made between these two groups.

In the question "what is Humanism in Medicine," the following alternatives were possible: a) temperamental question; B) true working tool; C) "a nine-day's wonder," a passing fad. The overwhelming majority of respondents considered humanism as a real working tool, both Group 1 (95.7%) and Group 2 (95.8%);  $p > 0.05$ .

Another question was about "who is responsible for humanistic formation?" The answers can be seen in Table 2.

Table 2. Medical intern students' opinion on "who is responsible for humanistic training."

Prior to the University and of the University	81 (68.6%)
Prior to the University (family and school)	26 (22%)
Family	8 (6.9%)
University	3 (2.5%)

When comparing the groups, 1, 5% in Group 1 consider that this responsibility is prior to the University. Therefore, this is a duty of the family and the school. However, in Group 2, 29% considered this duty to be prior to University and a duty of the University ( $p=0.02$ ). The vast majority of respondents think that the college is accountable for the ethical dilemma, and it is up to it to shape the professional. However, there will also be consequences if the professional does not have these values established in his or her background.

The next step was to compare groups of medical intern students according to their answers to the question "who is responsible for the humanistic formation?" Some statements have been posted to check their agreement or disagreement with these statements. Tables 3 and 4 demonstrate these results.

Table 3. Students' view related to the possibility of stimulating humanistic values in young university students, according to those who consider whether the University has the responsibility for the humanistic formation.

	"As the twig is bent, so is the tree inclined: It is impossible to stimulate humanistic values into university students; This should have been done in earlier stages of school and family education."		
Responsibility for humanistic education	Disagreed	Agreed	P value
Prior to the University and of the University	68 (82.9%)	14 (17.1%)	0.008
Prior to the University (family and school)	13 (56.5%)	10 (43.5%)	

Table 4. Medical intern students' vision related to the role of humanistic formation in the formal curriculum, according to those who consider whether the University has the responsibility in humanistic education.

	"Deviations from medical practice can be corrected and prevented, only if the teaching of humanistic education has more space in the formal curriculum through courses intentionally designed for this purpose."		
Responsibility for humanistic education			

	Disagreed	Agreed	P value
Prior to the University and of the University	36 (46.%)	41 (53.2%)	0.31
Prior to the University (family and school)	8 (34.8%)	15 (65.2%)	

The results seen in Table 4 reinforce the need for humanistic education and its inclusion as an effective subject and not only as a transversal theme within the disciplines.

When analyzing the statement proposed in question ten: “Although it is possible to teach some basic humanistic concepts through formal courses of humanistic education, the student’s character is already formed when he or she enters medical school. Courses designed for this purpose will not be able to reshape the student nor guarantee a humanistic posture in the future.” Of the 110 medical intern students, 86 (78.2%) disagreed with the statement.

Of these 86 who disagreed, 84 (98%) agreed with the following statement from another question: “Although the student’s conduct and character are already deeply modeled before entering medical school, he or she may be influenced by informal processes, such as contact with colleagues, the acquisition of professional experience, and the observation of examples given by physicians and professors.”

Therefore, when analyzing all the questions about the perception of the medical intern student in relation to the importance of humanization in medical practice, it is noticed that the great majority considers that the University also plays an important role in establishing these concepts, besides the family and the school.

**Perception of the medical intern student in relation to the role of the teacher/tutor in the process of humanization**

Next, the medical intern student perception of the role of the teacher/preceptor in the process of humanization was analyzed. A questioning addressed the professor’s perception of the needs of his students in medicine basic areas and specific technical knowledge (anatomy, physiology and other contents). Eighty medical intern students (66%) stated that their internship professors/preceptors perceived these needs. In these cases, the professors’ attitude in relation to them is shown in Table 5.

Table 5. The attitudes of professors/preceptors who perceive the needs of their medical intern students in basic areas of the medical course and prior to the internship.

Teach	17 (21.3%)
Just instigate them to make a revision	36 (45.0%)
They instigate them to make a review and insist upon results	27 (33.8%)

In the question regarding the professors/preceptors’ evaluation of the internship in relation to the undergraduate students’ mastery in mathematical knowledge, writing and speaking ability, and general knowledge over the years prior to their entrance into college or, even, in the family environment, 43 (36%) medical intern students stated that only the professor/preceptor could evaluate this domain. Of these 43 medical intern students, only 15 answered the next question, which referred to “What do they do about the gaps of these other domains?” Of these, 05 (33%) medical intern students stated professor taught these domains and 10 (67%) medical intern students reported professors “do nothing, after all, as it was said, these are domains that should have been formed in the years before entering college, or even in the family environment.” Of 121 medical intern students, 100 (83%) consider themselves to be holders of these domains mentioned above.

With regard to the next questioning “As responsible for the medical intern students’ education, do professors/preceptors/tutors of the internship get to know well the medical intern students for whom they are responsible for?” (e.g., Do they know who they are? In addition, Do they know his or her life circumstances, such as life history and college story). Results are shown in Table 6.

Table 6. Medical internal student's responses to the questioning of whether internship professors/preceptors/tutors know them, as well as their history or life at college.

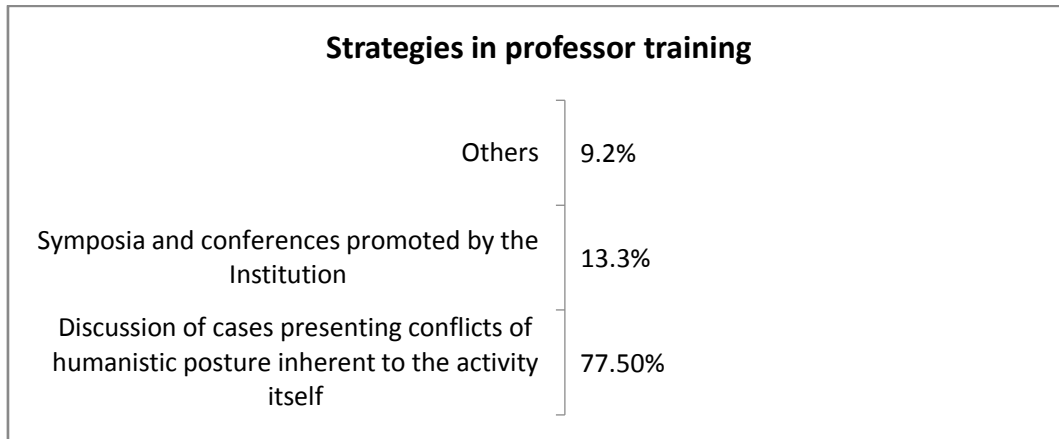
No, there is no time for this.	65 (53.7%)
Partially	53 (43.8%)
Yes	3 (2.5%)

Questions were crossed and compared about whether professors/preceptors/tutors of the internship are aware of the needs of their medical intern students in basic areas of medicine (anatomy, physiology, and other

contents), as well as if they know the life histories of the medical intern students who are under their responsibility. It was evident to the medical intern students' point of view that 2/3 of the professors perceived the deficiency in the basic medical subjects, both among those who know (67.9%) the life history of their medical intern students and those who do not know (64, 6%),  $p = 0.70$ . The fact that professors do not know the life history of the medical intern students under their responsibility, can characterize the depersonalization in the professor-medical intern student relationship, which implies in the humanized practice of medicine.

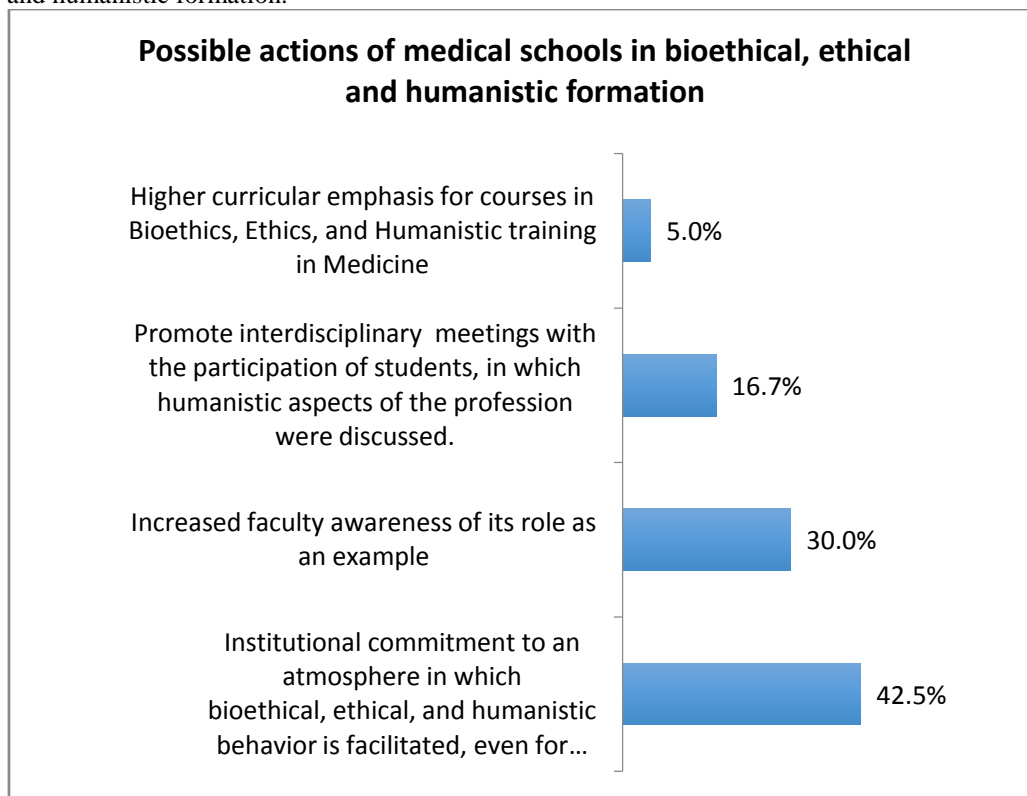
What strategies could be employed to improve the professor training for the task of fostering students' bioethical, ethical, and humanistic education? The answer to this question can be seen in Figure 1.

Figure1. Possible strategies in teaching training for the task of fomenting the bioethical, ethical, and humanistic formation of the students.



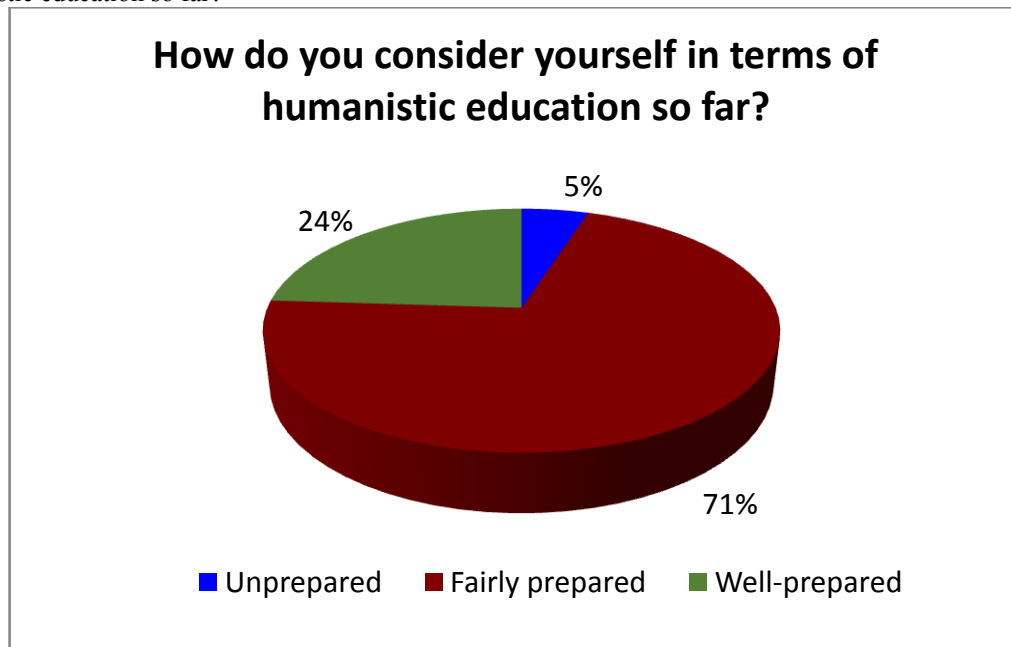
Medical intern students were also asked about what medical schools could do to help in this bioethical, ethical, and humanistic formation. Figure 2 represents these responses.

Figure 2. Actions of medical schools suggested by medical intern students to assist them in bioethical, ethical, and humanistic formation.



Finally, the questions addressed the medical intern student’s perception of his or her humanistic skills and competences, as well as where and with whom he or she learned such skills and competences. Figure 3 shows the answers to the question “How do you consider yourself in terms of humanistic education so far?”

Figure 3: Medical intern students’ answers to the question “How do you consider yourself in terms of humanistic education so far?”



The next question was about what humanistic skills and competences the medical intern student thought he or she had learned in his or her academic life. The responses are shown in Table 7.

Table 7. Humanistic skills and competences learned by medical intern students in their academic life.

To respect the patient	100 (83.3%)
Devote attention and listen to the patient	94 (78.3%)
To respect patients’ family members	87 (72.5%)
To Be humble, knowing your own limits	82 (68.3%)
Establish mutual trust with the patient	73 (60.8%)
Sit down to talk to the patient	71 (59.2%)
Distinguish the most appropriate communication modalities for each patient	62 (51.7%)
To have courage, perseverance, and conviction to overcome difficulties and act morally	56 (46.7%)
Walk the path between the sick person and the meaning that the disease has to the patient	49 (40.8%)
Put values inherent to the profession above personal or institutional interests, and attach greater importance to moral values in relation to other values	48 (40%)
In the face of a given situation to be able to identify the occurrence of a moral problem, to raise pertinent questions and to envisage the possible lines of action	47 (39.2%)

Being an enthusiast of one's profession	43 (35.8%)
Always put your five senses in what you do and not in other things	38 (31.7%)
By identifying the possible lines of action, make a morally justifiable choice; Take a decision, taking into account ethical principles such as justice, solidarity, and respect for the persons' autonomy	37 (30.8%)

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When medical intern students were questioned about what scenario or situation, and with whom they have learned such skills and competences, 77 of them (64.2%) said they have learned in a hospital and/or in an outpatient clinic during case discussions. Nineteen medical intern students (15.8%) reported they had learned in informal conversations, and only 2 of them (1.7%) reported they had learned in the classroom, in formal classes. Forty-nine medical intern students (40.8%) stated that they had learned such skills and competences from the patients themselves, and 43 medical intern students (35.8%) have learned with the professor/preceptor/tutor of the internship, and 3 medical intern students (2.5%) have learned with other medical intern students.

### **Discussion**

Medical intern students recognized humanization as a working tool, therefore, as necessary to their daily medical practice. Medical schools also consider humanization in medicine as necessary, so much that they have included this theme in their curricula. However, this approach seems to be still insufficient<sup>4</sup>. Until 1980, medical humanities disciplines were optional. Currently, their inclusion in curricula is mandatory, especially those dealing with Ethics, demonstrating its relevance<sup>5</sup>.

Medical intern students recognize that the university is also responsible for the humanistic education. According to them, the university would be responsible to shape the professional, thus recognizing its role. This means that medical intern students expect that other than just technical-scientific and rational content, universities will also provide humanistic modeling.

Medical intern students believe that the college can shape the medical student while they are in the undergraduate course, even though he or she does not yet present sufficient ethical and humanistic qualities to the practice of medicine. Most of them disagreed with the statement that it is impossible to instill humanistic values in young college students.

The recognition of the role of the University and the professors in reinforcing humanistic practices in medicine was clear. One author states that students and young professionals absorb, even unconsciously, the contemplated and lived bad examples<sup>2</sup>. If they absorb bad examples, they are also able to absorb good examples. It is evident that medical intern students expect much more from the medical course than just acquiring specific knowledge<sup>6,7</sup>. Medical students naturally bear an expectation and yearning for their profession. Among the motivations for choosing this course is humanism<sup>7</sup>.

Academics interviewed believe that the teaching of humanities can correct and prevent deviations from medical practice. However, humanistic issues are not yet sufficiently integrated into the hard core of medical background<sup>6</sup>.

As to the fact that the discipline of humanities is taught transversally, it is noteworthy emphasize the importance of the professor/tutor of the internship in instill it in daily practice, once several deficiencies can contribute to hamper the further proceeding of this teaching toward its goals.

Some factors are seen as being responsible for such deficiency, such as the lack of adequate examples given by professors; large amount of technical information rather than humanistic issues; the tension arising between the student's ideals and the daily clinical practice, in which the ethical doubt and emotional overload arise from the contact with suffering arises<sup>2,9,10</sup>.

One cannot fail to mention that many medical intern students see disciplines of humanities in medical education curriculum as uninteresting and dispensable, partly because, although fundamental to good medical practice, they are often superficially addressed in medical curricula<sup>8</sup>. As for the University, when one thinks of humanism, one starts from the assumption that the formation of the man is as important as the professional formation. Only the professor who lives this educational commitment can perceive what is lacking in the academic. The first step to be taken by the professor who wants to humanize is to admit that, first, he must humanize himself.

Several authors have argued that the theory should be put at the service of practice. It is necessary to coordinate the discipline of humanities to the practice along with other disciplines, performing the interdisciplinarity<sup>6,12,13</sup>. It is not enough to insert into the curriculum the subjects of humanities in the form of disciplines or thematic axes. It is necessary to insert the medical praxis into the humanities<sup>12</sup>. The humanization

of medicine is a relevant topic, debated worldwide, but, even in other countries, it has already been established that there is no place for humanities in the medical curriculum. The main challenge for interdisciplinary programs is to create an environment, and a space where the humanities can have an equal position and offer the same contribution as other disciplines.

### Conclusion

Medical intern students recognize the value and the importance of the humanities in the medical curriculum, as well as the role of the University in shaping and stimulating humanistic values and precepts into their medical future, highlighting their relevance in fully training the future physician.

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### Conflict of Interests

The authors have not disclosed any potential conflicts of interest.

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