

Euthanasia in Ecuador: a sociocultural and ethical analysis from the perspective of physicians and medical students

Eutanasia en Ecuador: un análisis sociocultural y ético desde la perspectiva de médicos y estudiantes de medicina

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ABSTRACT

This study analyzed the sociocultural and ethical factors that influence the criteria of physicians and medical students in Ecuador regarding euthanasia. The methodology was developed in a descriptive, cross-sectional way, with a sample of 178 participants. Data collection was carried out using a structured questionnaire that included sociodemographic variables and the ATE-ES-R scale. The results showed that most of the participants were general practitioners (46.1%) and students (42.1%), with a predominance of women and the catholic religion. In relation to attitudes towards euthanasia, a general trend towards moderate positions was observed, with averages between 2.39 and 3.31. Significant associations were identified between academic training and several items on the scale ($p < 0.05$), showing that students have greater acceptance of euthanasia, specialist doctors have more conservative positions, and general practitioners have an intermediate position. In conclusion, attitudes towards euthanasia are heterogeneous and are influenced by factors such as ethical training, clinical experience, and religious beliefs, highlighting the importance of strengthening bioethics education and establishing clear guidelines that guide clinical practice, promoting ethical care focused on the dignity of the patient at the end of life.

Keywords: euthanasia, healthcare staff attitudes, medical ethics, cross-cultural comparison.

RESUMEN

Este estudio analizó los factores socioculturales y éticos que influyen en el criterio de los médicos y estudiantes de medicina de Ecuador sobre la eutanasia. La metodología se desarrolló de forma descriptiva, transversal, con una muestra de 178 participantes. La recolección de datos se realizó mediante un cuestionario estructurado que incluyó variables sociodemográficas y la escala ATE-ES-R. Los resultados evidenciaron que la mayoría de los participantes fueron médicos generales (46,1 %) y estudiantes (42,1 %), con predominio del género femenino y de la religión católica. En relación con las actitudes hacia la eutanasia, se observó una tendencia general hacia posiciones moderadas, con medias entre 2,39 y 3,31. Se identificaron asociaciones significativas entre la formación académica y varios ítems de la escala ($p < 0,05$), evidenciando que los estudiantes presentan mayor aceptación hacia la eutanasia, los médicos especialistas posturas más conservadoras y los médicos generales una posición intermedia. En conclusión, las actitudes hacia la eutanasia son heterogéneas y están influenciadas por factores como la formación ética, la experiencia clínica y las creencias religiosas; resaltando la importancia de fortalecer la educación en bioética y de establecer lineamientos claros que orienten la práctica clínica, promoviendo una atención ética y centrada en la dignidad del paciente al final de la vida.

Palabras clave: eutanasia, actitudes del personal sanitario, ética médica, comparación transcultural.

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INTRODUCTION

The end of life constitutes one of the most sensitive and complex scenarios in human history, accompanied by pain, anguish, and uncertainty. Therefore, euthanasia has emerged as a solution to unbearable suffering and death (Germán, 2017; Sánchez-Cámara, 2019), since it is defined as the deliberate act of ending the life of a patient facing insufferable suffering derived from incurable or serious illness, confronting ethical principles such as human dignity, the right to life, autonomy, and non-maleficence, giving rise to countless ethical debates regarding the right to choose to end human life (Mroz et al., 2022).

The debate surrounding euthanasia has remained current worldwide since its definition; however, over the years, more countries have evidenced an increase in social support for this medical practice. For example, in Finland, it has been demonstrated that the ambivalence of medical personnel toward euthanasia has decreased compared to previous years, where, thanks to debate, solid and informed criteria and opinions have been formed by each of the individuals who are part of the medical team (Piili et al., 2022).

In 2002, with the approval of the Euthanasia Act, Belgium became one of the few countries in the world to legalize this practice. Since then, throughout its implementation, the legal framework and its application have undergone significant changes. Therefore, various studies and analyses maintain that Belgium has experienced a progressive expansion in the use of euthanasia, which in turn generates concerns from ethical and legal perspectives, partly linked to limitations in the application of the legal requirements conceived as safeguards and procedural guarantees (Raus et al., 2021).

In March 2021, the Spanish Congress approved the law regulating euthanasia and medically assisted suicide (SPA), incorporating both procedures into the healthcare system. This regulation falls within the framework of current European legislation, such as that of the Netherlands, Belgium, and Luxembourg, allowing for a comparative analysis of the Spanish law. This analysis identified relevant strengths, such as the inclusion of multiple safeguards, the recognition of the right to conscientious objection of healthcare personnel, and the requirement for comprehensive prior patient care, while also highlighting certain limitations, such as insufficient differentiation between euthanasia and SPA, limited definition of the role of the healthcare team,

lack of clarity regarding the evaluation committee, and the absence of parallel regulation of palliative care (Velasco et al., 2021).

In Ecuador, the decriminalization of euthanasia was carried out through Judgment 67-23-IN/24 of the Constitutional Court, issued on February 5, 2024 (República del Ecuador, 2024), constituting an unprecedented legal scenario in the country. Thus, this regulatory advancement has brought to light a significant regulatory and knowledge gap, since to date there is no regulatory law establishing specific clinical protocols, clearly defined eligibility criteria, institutional oversight mechanisms, or precise guidelines for the training and qualification of healthcare personnel responsible for its eventual application (Taylor, 2024).

Chronic degenerative diseases and cancer constitute some of the main causes of refractory suffering in the Ecuadorian population, considering that annually more than 30,000 new cancer cases and approximately 16,000 deaths associated with this pathology are recorded (International Agency for Research on Cancer, 2022). Likewise, Noncommunicable Diseases (NCDs) represent a significant percentage of national mortality, for which patients could eventually resort to requesting access to euthanasia (Coronel, 2025). Nevertheless, it is important to specify that the scope of the Ecuadorian constitutional ruling is not exclusively limited to chronic degenerative or oncological diseases, but rather contemplates other clinical conditions characterized by intense and persistent suffering (Párraga, 2025).

The critical axis regarding the ambivalence of this issue lies in the limited university training in bioethics, especially in topics such as euthanasia and ethical end-of-life decisions. It has been identified that, in medical undergraduate education, bioethical content occupies a marginal and poorly articulated space with clinical practice; for example, at the Technical University of Manabí, it represents less than 2 % of the curriculum (Celorio et al., 2025), which raises questions about how future professionals construct ethical criteria when faced with dilemmas such as euthanasia, in a context where knowledge and ethics must converge (Marín & García, 2025). Consistently, other studies at Ecuadorian universities show that a significant proportion of health sciences students present a low level of knowledge about euthanasia, with predominantly neutral or unfavorable attitudes, influenced mainly by religious beliefs and cultural factors present in their environment (Picón-Jaimes et al., 2022; Bustamante & López, 2025).

The relevance of this study is based on the convergence of a global bioethical debate, international regulatory experiences, and the recent Ecuadorian legal scenario derived from the decriminalization of euthanasia. Therefore, the results of this research will provide relevant data for strengthening academic programs, designing ethical training strategies, and formulating public policies and institutional guidelines. In this way, the main beneficiaries will be students and health professionals, as well as indirectly, patients and their families, who will be able to access more ethical, informed, and respectful care for human dignity at the end of life. The general objective is to analyze the sociocultural and ethical factors that influence the criteria of physicians and medical students in Ecuador regarding euthanasia.

METHODOLOGY

The research was conducted using a quantitative approach, along with a non-experimental observational design with a descriptive-correlational scope. Data collection was carried out using a cross-sectional approach, allowing for the analysis of potential relationships between variables without direct interventions on participants at a single point in time.

The study population consisted of 91 medical students in their ninth and tenth semesters, enrolled in the S2 academic period (September 2025 – January 2026) at the Technical University of Manabí, and 138 physicians, including general practitioners and specialists in clinical oncology, palliative care, intensive care, hematology, and emergency medicine, practicing at the SOLCA Manabí Oncology Hospital.

The sampling method used was non-probabilistic, purposive convenience sampling, based on relevance criteria. The sample size was calculated using the QuestionPro calculator with a 95% confidence level, a desired precision of 5%, and an expected proportion of 50%. With these parameters, the estimated sample size was 75 medical students and 103 general practitioners and specialists.

The inclusion criteria were residents of the province of Manabí, enrolled in their ninth or tenth semester during the S2 academic period (September 2025 – January 2026), and resident, general, and specialist physicians practicing at the Oncology Hospital “Dr. Julio Villacreses Colmont” in Portoviejo. Participants who withdrew or did not provide informed consent during the research process, and those who did not sign the informed consent form before participation,

were excluded from the study.

The inclusion of ninth- and tenth-semester medical students from the Technical University of Manabí is justified by their advanced and up-to-date academic training in bioethics, which fosters reflective analysis of the dilemmas associated with euthanasia. The inclusion of professionals from this hospital was due to their frequent contact with patients in advanced stages of chronic diseases, which increases the likelihood of facing complex end-of-life decisions.

Data collection was carried out using a self-administered survey with a structured questionnaire. The instrument was administered both in person and virtually via the Google Forms platform. The instrument is divided into two parts (Table 1): the first part is a form for sociodemographic and sociocultural information (profession, sex, age, and religious affiliation), and the second part consists of a series of ethical variables related to bioethics training and the Attitudes Toward Euthanasia Scale, revised Spanish version (ATE-ES-R) (Lerma-García et al., 2025), composed of 10 Likert-type items with five response options.

Table 1. Structure of the data collection instrument

Part	Component	Variables / Items	Purpose
Part I	Sociocultural and ethical section	Age, academic background, gender, religion, and bioethics training	To characterize the participants and contextualize their attitudes towards euthanasia
Part II	ATE-ES-R scale	10 Likert-type items (overall score)	To assess the general attitude towards euthanasia among medical students and physicians, specialist physicians

The instrument aims to identify and compare the attitudes of medical students and healthcare professionals toward euthanasia, allowing for a comprehensive analysis with a descriptive-correlational scope. Therefore, the statistical software SPSS version 27 was used for data processing and analysis. Previously, the information was entered and cleaned in Microsoft Excel, where variables were recoded, and scores for items 6 and 9 of the ATE-ES-R scale were reversed (Table 2). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were applied in SPSS, as well as inferential tests such as chi-square, cross-tabulations, and correlation analysis, depending on the nature of the variables, establishing a statistical

significance level of $p < 0.05$.

Table 2. Items of the ATE-ES-R scale (Lerma-García et al., 2025)

Item	Statement
1	If a patient in severe pain requests it, the care team must withdraw life support and allow the patient to die.
2	It is acceptable for the healthcare team to administer enough medication to end a patient's life if they do not believe the patient will recover.
3	If a patient in severe pain requests it, the healthcare team must prescribe enough medication to end their life.
4	It is acceptable for the healthcare team to withdraw life support and let a patient die if they do not believe that the patient will recover.
5	It is acceptable for the healthcare team to administer enough medication to a suffering patient to end their life if the doctor believes the pain is too severe.
6*	Even if the care team does not believe that a patient will recover, it would be wrong to end a patient's life.
7	It is acceptable for the healthcare team to withdraw life support from a patient and let them die if they believe the patient's pain is too intense.
8	If a dying patient requests it, the care team must prescribe enough medication to end their life.
9*	Even if the healthcare team knows that a patient is suffering from intense and uncontrollable pain, it would be wrong to end that patient's life.
10	If a dying patient requests it, the care team must withdraw life support and allow the patient to die.

*Items with reversed scoring.

The data were processed anonymously. The records do not contain sensitive or identifiable information; therefore, the surveys were conducted completely anonymously, guaranteeing confidentiality and minimizing any risk to participants. The study was conducted with the corresponding institutional authorizations from the hospital and the Faculty of Health Sciences of the Technical University of Manabí, and conflicts of interest have been duly declared by the authors in accordance with the CEISH-UTM guidelines.

RESULTS AND DISCUSSION

Regarding the academic and professional background of the study participants, the majority were general practitioners, representing 46.1% (n= 82) of the sample. Medical students comprised the second largest group at 42.1% (n= 75), demonstrating a significant participation of future professionals. Finally, specialist physicians made up the smallest group, at 11.8% (n= 21).

Analyzing this distribution by training, it is noted that the specialist group was predominantly male (n= 14) compared to female (n= 7). Among general practitioners, the distribution was fairly balanced, with a slight male majority (n= 42) compared to females (n= 40). In contrast, the medical student group consisted of a higher proportion of females (n= 47) compared to males (n= 27), with one case identified as belonging to a different gender (n= 1).

The findings indicate that students tend to adopt more favorable stances toward euthanasia, while specialist physicians tend to adopt more conservative positions. This pattern has been described in recent studies, such as those by Emanuel et al. (2020) and Lau and Wong (2022), who point out that students show greater openness toward practices like euthanasia due to more recent training in bioethics and less exposure to the legal and emotional implications of clinical practice. On the other hand, the study by Rodríguez-Prat et al. (2016) suggests that professionals with more clinical experience tend to adopt more restrictive stances, influenced by their direct experience of suffering, the doctor-patient relationship, and legal responsibility.

Regarding gender (Table 3), greater female participation was observed, especially in the student group, which coincides with current trends of feminization in the medical profession in Latin America.

Table 3. Gender and profession of the participants

Training	Gender			Total
	Female	Male	Other	
Specialists	7	14	0	21
General	40	42	0	82
Student	47	27	1	75
Total	94	83	1	178

However, the results did not find a direct association with attitudes toward euthanasia; the research by Narayanan et al. (2025) suggests that, although gender differences exist in some

contexts, these are not always determining factors and are usually mediated by cultural and educational factors.

Table 4 shows the relationship between the distribution of participants by age group and their academic background. The most represented age group is ≤ 26 years, with a total of 81 participants, the vast majority of whom are medical students ($n=74$), with a smaller number being general practitioners ($n=7$). No specialists were present. This result coincides with the inclusion of students in advanced stages of their studies.

Table 4. Age and religion of the participants

Category	Training			Total
	Specialists	Student	General	
Age (Years)				
≤ 26	0	74	7	81
27 – 31	0	0	59	59
32 – 37	4	1	14	19
38 – 42	5	0	2	7
43 – 47	6	0	0	6
48 – 52	3	0	0	3
53 – 58	2	0	0	2
64+	1	0	0	1
Total	21	75	82	178
Religion				
Agnostic	2	3	3	8
Catholic	17	58	55	130
Christian	1	8	10	19
Evangelical	0	2	6	8
Another: The Church of Jesus Christ of Latter-day Saints	0	4	0	4
Another: Atheist	1	0	8	9
Total	21	75	82	178

On the other hand, in the 27-31 age group ($n=59$), all participants are general practitioners, suggesting a transition between academic training and professional practice. As age increases, there is a greater presence of specialist physicians, concentrated mainly in the 32-47 age group, where the distribution between specialists and general practitioners is more balanced, although with less student participation. In the older age groups (≥ 48 years), participation corresponds

almost exclusively to specialist physicians, thus reflecting professional progression and the acquisition of specializations over time.

The age distribution reinforces these findings, showing that the youngest participants are primarily students, while the older participants are predominantly specialists. This relationship suggests that accumulated professional experience could influence the formation of more cautious or conservative attitudes toward euthanasia, as indicated by recent studies showing that age and years of professional experience are associated with lower acceptance of euthanasia practices, as reported in the study by Chen et al. (2025).

Regarding religion, Catholicism is clearly predominant, with a total of 130 participants, representing the majority of the sample. This group includes 17 specialists, 58 students, and 55 general practitioners, demonstrating its presence at all levels of training. A smaller proportion of participants identified as Christian ($n=19$), primarily distributed among general practitioners ($n=10$) and students ($n=8$), with little representation among specialists ($n=1$). Evangelical religions ($n=8$) and the agnostic category ($n=8$) also have a small presence, although they are represented in the various groups.

Furthermore, within “other religions” there are specific categories, such as the Church of Jesus Christ of Latter-day Saints ($n=4$), which appears only among students, and the group of participants who identify as atheists ($n=9$), mostly general practitioners ($n=8$) and with minimal presence among specialists ($n=1$).

Regarding religion, the predominance of Catholicism in the sample is a relevant finding, given that religious beliefs have been widely associated with more restrictive stances toward euthanasia. The study by Hamdan et al. (2025) concurs that religious affiliation, especially in Latin American contexts, significantly influences ethical decision-making, fostering attitudes of rejection or caution toward euthanasia. However, the presence of agnostic and atheist participants, although smaller, suggests that more diverse perspectives coexist within the health personnel.

The vast majority of participants, 99.4% ($n=177$), reported having received bioethics training. In contrast, only 0.6% ($n=1$) indicated they had not received such training. These results show a high prevalence of bioethics knowledge among both students and healthcare professionals, which is consistent with the participants' academic level and clinical context. This finding is

relevant to the study, as it suggests that attitudes toward euthanasia are influenced by prior knowledge of ethical principles, which can facilitate a more informed and reflective analysis of the issue.

A key strength of the study is the high proportion of participants trained in bioethics (99.4%). Sulmasy et al. (2017) emphasize that bioethics education promotes the development of critical thinking and informed decision-making in the face of complex dilemmas such as euthanasia. However, despite this training, the results reveal a diversity of positions, indicating that bioethical knowledge does not necessarily standardize attitudes, but rather can enrich reflective analysis from different perspectives.

In the descriptive analysis of the items on the ATE-ES-R scale, it is observed that attitudes toward euthanasia in the studied population tend to be moderate, with variations depending on the specific context presented in each item. This reflects the complexity of the issue and the diversity of perceptions among the participants. The measures of central tendency show means ranging from 2.39 to 3.31, indicating a general inclination toward intermediate positions regarding euthanasia. The medians are mainly between 2 and 3, demonstrating responses centered on neutral or moderate options within the Likert scale.

Item 10 has the highest mean (3.31) and a median of 4, suggesting greater acceptance compared to the other items. Conversely, items 2 and 7 registered the lowest means (2.40 and 2.39, respectively), indicating a relatively lower level of acceptance of the statements made in those cases. Regarding dispersion, the standard deviations ranged from 1.197 to 1.471, reflecting moderate variability in the responses. Furthermore, skewness values were close to zero for most items, indicating fairly symmetrical distributions, although some showed slight positive or negative skewness. Additionally, the negative kurtosis in all items suggests platykurtic distributions, meaning a lower concentration of responses around the mean and greater dispersion at the extremes.

In the descriptive analysis of the ATE-ES-R scale (Table 5), the moderate attitudes found align with recent studies showing a trend toward indecision or intermediate positions among healthcare professionals, reflecting the ambivalence generated by euthanasia as a clinical practice, according to the study by Bravo et al. (2021). The greater acceptance observed in item 10 could

be linked to situations where patient autonomy is prioritized in terminal contexts, while the lower acceptance in items related to the active administration of measures to cause death indicates a greater resistance to active euthanasia, in line with previous findings such as that of Kouwenhoven et al. (2014).

Table 5. Descriptive statistics of the items of the ATE-ES-R scale

ATE	Median	Average	95% CI	Deviation standard	Asymmetry	Kurtosis
ATE1	3.00	2.93	2.71 – 3.15	1.471	0.096	-1.365
ATE2	2.00	2.40	2.21 – 2.60	1.304	0.482	-0.982
ATE3	3.00	2.76	2.56 – 2.96	1.353	0.133	-1.183
ATE4	2.00	2.46	2.28 – 2.64	1.240	0.576	-0.658
ATE5	3.00	2.68	2.49 – 2.87	1.277	0.226	-1.064
ATE6	3.00	2.84	2.98 – 3.33	1.197	0.028	-0.975
ATE7	2.00	2.39	2.21 – 2.57	1.208	0.525	-0.742
ATE8	3.00	2.93	2.75 – 3.12	1.260	-0.043	-1.036
ATE9	3.00	2.94	2.88 – 3.24	1.208	0.061	-0.863
ATE10	4.00	3.31	3.12 – 3.51	1.324	-0.287	-1.112

Responses to the items on the ATE-ES-R scale, according to the participants' training (specialist physicians, general practitioners, and medical students), allow for a comparison of response trends within each group. Specialist physicians showed a higher concentration of responses in the disagreement categories (strongly disagree and disagree), indicating a more conservative stance toward euthanasia. Agree and strongly agree responses were less frequent, showing lower acceptance in this group.

Among general practitioners, responses were more evenly distributed across the different categories, with a slight inclination toward disagreement in some items and toward indecision or moderate acceptance in others. This reflects an intermediate position, likely influenced by both academic training and clinical experience. Medical students, on the other hand, showed a higher proportion of responses in the agree and strongly agree categories for several items, indicating greater acceptance of euthanasia compared to professionals (Table 6).

Table 6. ATE-ES-R scale of attitudes towards euthanasia

	ATE	Training								X ²
		Specialist		General		Student		Total		
		N	%	N	%	N	%	N	%	
ATE 1	Completely in disagreement	8	38.1	26	31.7	7	9.3	41	23.0	< 0.001*
	In disagreement	7	71.4	18	53.7	11	24.0	36	43.3	
	Undecided	2	81.0	12	68.3	20	50.7	34	62.4	
	Agreed	3	95.2	7	76.8	18	74.7	28	78.1	
	Totally agree	1	100.0	19	100.0	19	100.0	39	100.0	
	Total	21	11.8	82	46.1	75	42.1	178	100.0	
ATE 2	Completely in disagreement	9	42.9	33	40.2	18	24.0	60	33.7	0.014*
	In disagreement	8	81	14	57.3	20	50.7	42	57.3	
	Undecided	2	90.5	17	78.0	14	69.3	33	75.8	
	Agreed	2	100	16	97.6	12	85.3	30	92.7	
	Totally agree	0	0.0	2	100.0	11	100.0	13	100.0	
	Total	21	11.8	82	46.1	75	42.1	178	100.0	
ATE 3	Completely in disagreement	8	38.1	23	28.0	13	17.3	44	24.7	0.042*
	In disagreement	7	71.4	17	48.8	10	30.7	34	43.8	
	Undecided	4	90.5	19	72.0	19	56.0	42	67.4	
	Agreed	2	100.0	12	86.6	22	85.3	36	87.6	
	Totally agree	0	0.0	11	100.0	11	100.0	22	100.0	
	Total	21	11.8	82	46.1	75	42.1	178	100.0	
ATE 4	Completely in disagreement	10	47.6	20	24.4	15	20.0	45	25.3	0.060 ns
	In disagreement	6	76.2	29	59.8	25	53.3	60	59.0	
	Undecided	1	81.0	18	81.7	15	73.3	34	78.1	
	Agreed	4	100.0	11	95.1	9	85.3	24	91.6	
	Totally agree	0	0.0	4	100.0	11	100.0	15	100.0	
	Total	21	11.8	82	46.1	75	42.1	178	100.0	
ATE 5	Completely in disagreement	9	42.9	19	23.2	12	16.0	40	22.5	0.284 ns
	In disagreement	6	71.4	20	47.6	20	42.7	46	48.3	
	Undecided	3	85.7	16	67.1	20	69.3	39	70.2	
	Agreed	3	100.0	18	89.0	16	90.7	37	91.0	
	Totally agree	0	0.0	9	100.0	7	100.0	16	100.0	
	Total	21	11.8	82	46.1	75	42.1	178	100.0	
ATE 6	Completely in disagreement	0	0.0	6	7.3	8	10.7	14	7.9	0.199 ns
	In disagreement	2	9.5	26	39.0	17	33.3	45	33.1	
	Undecided	8	47.6	21	64.6	17	56	46	59.0	
	Agreed	7	81.0	15	82.9	23	86.7	45	84.3	
	Totally agree	4	100.0	14	100.0	10	100	28	100.0	
	Total	21	11.8	82	46.1	75	42.1	178	100.0	

ATE		Training								X ²
		Specialist		General		Student		Total		
		N	%	N	%	N	%	N	%	
ATE 7	Completely in disagreement	9	42.9	22	26.8	19	25.3	50	28.1	0.284 ns
	In disagreement	8	81.0	29	62.2	19	50.7	56	59.6	
	Undecided	3	95.2	12	76.8	19	76.0	34	78.7	
	Agreed	1	100.0	13	92.7	14	94.7	28	94.4	
	Totally agree	0	0.0	6	100.0	4	100.0	10	100.0	
	Total	21	11.8	82	46.1	75	42.1	178	100.0	
ATE 8	Completely in disagreement	6	28.6	18	22.0	6	8.0	30	16.9	0.014*
	In disagreement	7	61.9	16	41.5	14	26.7	37	37.6	
	Undecided	6	90.5	14	58.5	26	61.3	46	63.5	
	Agreed	2	100.0	25	89.0	18	85.3	45	88.8	
	Totally agree	0	0.0	9	100.0	11	100.0	20	100.0	
	Total	21	11.8	82	46.1	75	42.1	178	100.0	
ATE 9	Completely in disagreement	0	0.0	6	7.3	15	20.0	21	11.8	0.001*
	In disagreement	2	9.5	25	37.8	10	33.3	37	32.6	
	Undecided	8	47.6	20	62.2	26	68.0	54	62.9	
	Agreed	7	81	15	80.5	20	94.7	42	86.5	
	Totally agree	4	100	16	100.0	4	100.0	24	100.0	
	Total	21	11.8	82	46.1	75	42.1	178	100.0	
ATE 10	Completely in disagreement	5	23.8	12	14.6	3	4.0	20	11.2	0.012*
	In disagreement	6	52.4	13	30.5	16	25.3	35	30.9	
	Undecided	7	85.7	11	43.9	15	45.3	33	49.4	
	Agreed	3	100	25	74.4	21	73.3	49	77.0	
	Totally agree	0	0.0	21	100.0	20	100.0	41	100.0	
	Total	21	11.8	82	46.1	75	42.1	178	100.0	

However, indecision was also present in some cases, which could reflect an ongoing process of developing and forming ethical criteria. Inferential analysis confirmed significant associations between training and several items on the scale, supporting the hypothesis that academic training and professional experience influence attitudes toward euthanasia. In particular, students showed greater acceptance, specialists showed greater rejection, and general practitioners adopted an intermediate position. This gradient has been reported in recent research, which describes an evolution in attitudes as clinical experience increases, as noted in the study by Villamarín and Cantuñi (2023).

Table 7 shows that, of the total participants ($n = 178$), the vast majority reported having received bioethics training ($n = 177$), while only one participant indicated they had not ($n = 1$). Regarding the distribution of attitudes, among those who received bioethics training, the neutral stance predominated ($n = 93$), followed by rejection ($n = 60$), and, to a lesser extent, acceptance ($n = 24$). The only participant without bioethics training fell into the rejection category. The chi-square test for association analysis did not show a statistically significant relationship between having received bioethics training and attitudes toward euthanasia ($\chi^2 = 0.381$; $p > 0.05$). This indicates that, in the studied population, bioethics training is not significantly associated with acceptance, neutrality, or rejection of euthanasia.

Table 7. Attitudes toward euthanasia and bioethics training

Have you received Bioethics in your professional academic training?	Attitude towards euthanasia			Total	X ²
	Rejection	Neutral	Acceptance		
No	1	0	0	1	0.381
Yes	60	93	24	177	
Total	61	93	24	178	

Regarding the relationship between attitudes toward euthanasia and bioethics training, recent studies indicate that the latter does not necessarily determine a specific stance on euthanasia, but rather influences how professionals analyze ethical dilemmas. For example, the study by Verhofstadt et al. (2024) highlights that those positions on euthanasia are mediated by the interaction of personal values, legal frameworks, and clinical experiences, rather than by isolated academic training. Similarly, the study published by Mimarakis et al. (2025) found that variables such as religiosity, empathy, and the perception of death have a greater impact on attitudes toward euthanasia than academic training, suggesting that bioethics alone may be insufficient to modify attitudes (Mimarakis et al., 2025).

Table 8 shows that, in the female group, a neutral attitude predominated ($n = 50$), followed by rejection ($n = 29$) and, to a lesser extent, acceptance ($n = 15$). Similarly, in the male group, a neutral stance was also the most prevalent ($n = 43$), followed by rejection ($n = 31$) and acceptance ($n = 9$). The only participant who identified with another gender fell into the rejection category.

The chi-square test for association did not find a statistically significant relationship between gender and attitude toward euthanasia ($\chi^2 = 0.502$; $p > 0.05$). This indicates that

acceptance, neutrality, or rejection of euthanasia does not depend on gender in the studied population. However, although a slightly higher proportion of acceptance was observed in the female group compared to the male group, this difference was not statistically significant and, therefore, cannot be considered a conclusive association. Furthermore, the low frequency in the “other” category limits the possibility of making valid comparisons for this group.

Regarding gender, this study shows no significant association between gender and attitudes toward euthanasia. Similarly, the systematic review by Grundnig et al. (2025) concludes that gender has a limited or non-significant influence on attitudes toward end-of-life decisions. However, some recent studies show important nuances, such as that by Stergiannis et al. (2024), which identified that women may exhibit slightly greater acceptance, possibly related to higher levels of empathy or sensitivity to patient suffering.

Table 8. Attitudes toward euthanasia by gender

Gender	Attitude towards euthanasia			Total	X ²
	Rejection	Neutral	Acceptance		
Female	29	50	15	94	0.502
Male	31	43	9	83	
Other	1	0	0	1	
Total	61	93	24	178	

These findings indicate that attitudes toward euthanasia are not homogeneous and are determined by multiple factors, including education, experience, age, and religion. This underscores the importance of strengthening bioethics education from a critical and contextualized perspective, enabling future healthcare professionals to comprehensively address the ethical dilemmas related to end-of-life care.

Furthermore, it is essential to continue investigating attitudes toward euthanasia in the healthcare setting, considering the influence of factors such as academic training, clinical experience, and personal beliefs. The variability observed in the responses demonstrates the need to explore these aspects further through future studies, preferably with longitudinal designs and larger, more representative samples. It is recommended that qualitative approaches be incorporated to facilitate a deeper understanding of the ethical and emotional foundations underlying these positions, thus contributing to strengthening bioethics education and promoting more informed and humanized clinical decisions.

CONCLUSIONS

This study analyzed the sociocultural and ethical factors influencing the views of physicians and medical students in Ecuador regarding euthanasia, revealing that attitudes toward this practice are not uniform but rather result from a complex interaction of multiple variables. Academic training and professional experience were identified as key factors in this research. The influence of sociocultural factors, especially religion, along with the diversity of personal experiences and values, reinforces the multifactorial nature of attitudes toward euthanasia, highlighting the need to address it from a comprehensive perspective. In the Ecuadorian context, marked by recent legal changes surrounding euthanasia, these results are particularly relevant, as they demonstrate the urgent need to strengthen ethical training, establish clear guidelines, and foster spaces for reflection within the healthcare sector. In this sense, the study provides valuable evidence for the design of educational strategies and public policies aimed at ensuring comprehensive, ethical, and patient-centered care at the end of life.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

AUTHOR CONTRIBUTIONS

Conceptualization: Gémylith G. Álava and Alfredo L. Marín. **Data curation:** Gémylith G. Álava. **Formal analysis:** Gémylith G. Álava and Alfredo L. Marín. **Investigation:** Gémylith G. Álava and Alfredo L. Marín. **Methodology:** Gémylith G. Álava and Alfredo L. Marín. **Resources:** Gémylith G. Álava. **Software:** Gémylith G. Álava. **Supervision:** Gémylith G. Álava and Alfredo L. Marín. **Validation:** Gémylith G. Álava and Alfredo L. Marín. **Visualization:** Gémylith G. Álava and Alfredo L. Marín. **Writing – original draft:** Gémylith G. Álava and Alfredo L. Marín. **Writing – review & editing:** Gémylith G. Álava and Alfredo L. Marín.

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