

Knowledge and attitudes about euthanasia among Peruvian medical interns

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Abstract

Euthanasia is the deliberate act of ending a person's life at the request of the patient or their family. This study assessed the knowledge, attitudes, and associated factors regarding euthanasia among medical interns at a Peruvian university (2023–2024). An analytical, cross-sectional study was conducted with 103 participants. Frequencies, percentages, and prevalence ratios were calculated using Poisson regression (95%CI, $p < 0.05$). Of the participants, 55.3% were female, with a mean age of 24.9 years. In total, 63.1% demonstrated a high level of knowledge about euthanasia, while 50.5% showed a negative attitude toward this practice. No significant association was found between knowledge and attitude ($p > 0.05$); however, there was a significant association between bioethics knowledge and knowledge level ($p = 0.00$), and between having seen or read about euthanasia cases and knowledge level ($p = 0.00$).

Keywords: Knowledge. Attitudes. Students, medical. Euthanasia.

Resumo

Conhecimentos e atitudes sobre eutanásia entre internos de medicina peruanos

A eutanásia é o ato deliberado de terminar a vida de uma pessoa, a pedido do paciente ou de seus familiares. Este estudo avaliou os conhecimentos, atitudes e fatores associados sobre eutanásia em internos de medicina de uma universidade peruana (2023–2024). Foi realizado um estudo analítico, transversal, com 103 participantes. Frequências, percentuais e razões de prevalência foram calculadas por meio de regressão de Poisson (IC 95%, $p < 0,05$). Do total, 55,3% eram mulheres, com média de idade de 24,9 anos. Verificou-se que 63,1% apresentaram alto nível de conhecimento sobre eutanásia e 50,5% demonstraram atitude negativa em relação a essa prática. Não foi encontrada associação significativa entre conhecimento e atitude ($p > 0,05$); entretanto, houve associação significativa entre conhecimento em bioética e nível de conhecimento sobre eutanásia ($p = 0,00$), assim como entre ter visto ou lido casos de eutanásia e o nível de conhecimento ($p = 0,00$).

Palavra-chave: Conhecimento. Atitude. Estudantes de medicina. Eutanásia.

Resumen

Conocimientos y actitudes sobre eutanasia en internos de medicina peruanos

La eutanasia es el acto deliberado de terminar con la vida de una persona, a solicitud del paciente o sus familiares. Este estudio evaluó los conocimientos, actitudes y factores asociados sobre la eutanasia en internos de medicina de una universidad peruana (2023-2024). Se realizó un estudio analítico, transversal, con 103 participantes. Se calcularon frecuencias, porcentajes y razones de prevalencia mediante regresión de Poisson (IC 95%, $p < 0,05$). El 55,3% fueron mujeres, con una edad media de 24,9 años. El 63,1% tuvo conocimientos altos sobre eutanasia; y el 50,5% mostró una actitud negativa hacia esta práctica. No se halló asociación entre conocimientos y actitud ($p > 0,05$), pero sí entre conocimientos en bioética y nivel de conocimientos sobre la eutanasia ($p = 0,00$), y entre haber visto o leído casos de eutanasia y el nivel de conocimientos ($p = 0,00$).

Palabras clave: Conocimientos. Actitudes. Estudiantes de medicina. Eutanasia.

Euthanasia, which is understood as the action of ending the life of a patient at his explicit request aiming to alleviate the suffering caused by an incurable disease, is a complex and controversial issue that generates ethical, legal, and social debates at a global level. This concept has been widely discussed in industrialized countries, where its execution is questioned from an ethical perspective, the possible violation of the Hippocratic Oath and its confrontation with various religious beliefs¹.

Currently, voluntary euthanasia—conducted with the patient’s consent—is legal in only a few countries, such as Canada, New Zealand, Belgium, the Netherlands, Luxembourg, Colombia, Spain, and some states in Australia². In these contexts, the duties of the physician towards terminal patients are recognized, emphasizing the provision of adequate care that ensures a dignified death, the alleviation of suffering and the preservation, as far as possible, of the quality of life until the end².

Euthanasia can be defined as the action of a health professional who accelerates or facilitates the rapid and painless death of a patient, at the request of the patient, to free them from intolerable and irreversible suffering³. It is essential to differentiate it from other practices, such as assisted suicide, which implies that the patient ends their life with means provided by the physician, without direct intervention by the physician; and dysthanasia, which refers to the artificial prolongation of life through the use of medical technology in patients with irreversible or terminal diseases⁴.

According to its mode of action, euthanasia can be classified as passive, active, and indirect active. Passive euthanasia occurs when necessary treatment is omitted or therapy is interrupted to avoid prolonged suffering of the patient. Currently, the term “limitation of therapeutic effort” is preferred, in recognition of the importance of avoiding unnecessary prolongation of agony⁵. Active euthanasia involves the administration of a lethal substance to cause death to the terminally ill patient at their request, such as the use of high doses of morphine³. Finally, indirect active euthanasia is based on the use of drugs intended

to relieve pain, even when they can accelerate death, such as powerful analgesics⁴.

The debate on euthanasia in the medical field encompasses multiple factors, related to clinical, sociodemographic, legal, political, religious, and ethical considerations, which influence the knowledge and attitudes of health professionals. From a bioethical perspective, there are contradictory positions: the principle of autonomy supports the patient’s right to decide on their treatment, while the principle of non-maleficence and the fundamental right to life, enshrined in the *Universal Declaration of Human Rights* of the United Nations, can be interpreted as arguments against this practice⁴.

From a legal point of view, the regulation of euthanasia varies worldwide. In countries such as Albania, Luxembourg, and Germany, voluntary euthanasia is allowed, while assisted suicide is legal in Switzerland and some states in the United States⁶. Euthanasia has been decriminalized in the Netherlands, Belgium, and Colombia. In Latin American, Chile is discussing the “Dignified Death and Palliative Care” law, which seeks to regulate both euthanasia and assisted suicide³.

In Peru, euthanasia is considered illegal under current legislation. Decriminalization would require regulatory reform, but even in that scenario, physicians would have the right to conscientious objection. The International Code of Medical Ethics, drawn up by the World Medical Association, reaffirms the Hippocratic Oath’s commitment to preserve life in all circumstances⁵. Likewise, the Code of Ethics and Deontology of the Medical College of Peru defends life as a fundamental right and stresses that medical care must guarantee respect for the natural process of death, avoiding unnecessary prolongation of suffering and promoting the use of palliative care when necessary⁷.

Previous studies have shown that the perception of euthanasia among medical students tends to be favorable, with a greater inclination among men and those with agnostic beliefs⁶. Although advances in medicine and technology have made it possible to prolong life, they have also raised questions about the quality of life and the right to a dignified death, opening a door to bioethical analysis and physician participation.

This study seeks to contribute to the understanding of the perceptions and attitudes of future physicians about euthanasia, considering variables such as age, sex, and religious beliefs. The aim is to determine the level of knowledge and attitudes towards euthanasia, as well as its associated factors, in medical interns of a Peruvian university during the period 2023-2024.

Method

A quantitative, observational, analytical, and cross-sectional study was conducted in a sample of 103 medical interns from Ricardo Palma University.

For data analysis, frequencies and percentages were calculated, and Poisson regression was applied to estimate crude and adjusted prevalence ratios, with their respective 95% confidence intervals (95%CI), considering $p < 0.05$ as statistically significant.

Data collection was conducted by an interview technique, using a questionnaire developed by Ramírez and collaborators, published in 2016, which was designed to assess knowledge and attitudes about euthanasia in medical interns and resident physicians^{8,9}.

Regarding the ethical aspects, this study was evaluated and approved by the Institutional Ethics Committee of the Ricardo Palma University. Respect for the autonomy of the participants was guaranteed by signing the informed consent.

Results

Table 1 shows that, of the 103 medical interns evaluated, 55.3% were female. The mean age was 24.9+3.8 years. Regarding religious belief, most of the participants identified themselves as Catholic (73.8%), while the lowest proportion corresponded to the evangelical religion (2.9%).

Moreover, 95.1% (98 participants) reported having knowledge about euthanasia, having received training in bioethics, and having witnessed a case related to this topic. Regarding the attitude towards euthanasia, 87.4% (90 participants) endorsed it, while 12.6% (13 participants) expressed their disagreement (Table 2).

Table 1. General characteristics of medical interns at Ricardo Palma University, in the period 2023-2024

	Frequency n=103	Percentage %
Sex		
Male	46	44.7%
Female	57	55.3%
Age (years)*	24.9	(SD 3.8)
Religious belief		
Agnostic	17	16.5%
Catholic	76	73.8%
Evangelical	3	2.9%
Other	7	6.8%
Euthanasia knowledge		
High (5+)	65	63.1%
Low (<5)	38	36.9%
Attitudes about euthanasia		
Positive (>88 points)	51	49.5%
Negative (<88 points)	52	50.5%

*Mean and standard deviation.

Source: prepared by the authors.

Table 2. Perception of Bioethics and Euthanasia in Medical Interns (2023-2024)

	Yes		No	
	n	%	n	%
1. Do you have knowledge of bioethics?	98	95.1%	5	4.9%
2. Have you completed university studies in bioethics?	92	89.3%	11	10.7%
3. Have you heard, seen, or read about any cases of euthanasia?	97	94.2%	6	5.8%
4. Have you witnessed any cases of euthanasia?	97	94.2%	6	5.8%
5. Do you endorse euthanasia?	90	87.4%	13	12.6%

Source: prepared by the authors.

In the bivariate analysis, no association was found between the attitude towards euthanasia and the variables: level of knowledge on the subject, age, sex, religious belief, perception of knowledge in bioethics, and previous experience in observing or reading about a case ($p > 0.05$) (Table 3).



Table 3. Bivariate analysis between knowledge and attitudes about euthanasia in inmates (2023-2024), using Poisson regression

	Attitudes about euthanasia		
	RPc [§]	95%CI	p value
Age	1.014	0.98-1.04	0.342
Sex			
Male	1.062	0.72-1.56	0.759
Female	Ref.		
Religious belief			
With religious belief	1.51	0.77-2.98	0.22
No religious belief	Ref.		
Do you have knowledge about bioethics?			
No	1.2	0.56-2.53	0.63
Yes	Ref.		
Have you heard, seen, or read about any cases of euthanasia?			
Yes	3.15	0.51-19.23	0.21
No	Ref.		
Have you witnessed any cases of euthanasia?			
No	3.15	0.51-19.23	0.21
Yes	Ref.		
Do you endorse euthanasia?			
No	2.07	1.56-2.74	0.00
Yes	Ref.		
Euthanasia knowledge			
Low (<5)	1.35	0.93-1.97	0.11
High (+5)	Ref.		

[§] Crude prevalence ratio.

Source: prepared by the authors.

Similarly, no association was found between the level of knowledge about euthanasia and the variables sex, religious belief, and being in favor of or against euthanasia ($p > 0.05$). However, a significant association was identified with the variables age, knowledge about bioethics,

and having heard, read, or witnessed a case of euthanasia (Table 4).

Finally, in the multivariate analysis, it was found that a low level of knowledge about euthanasia was significantly associated with those participants who stated “no knowledge about Bioethics” (RPa: 2.56; 95% CI: 1.66 - 3.94; $p = 0.00$), adjusted for age covariates, and having seen or read a case of euthanasia (Table 5).

Table 4. Bivariate analysis between general characteristics and knowledge about euthanasia in medical interns (2023-2024), using Poisson regression

	Euthanasia knowledge		
	RPc [§]	95%CI	p value
Age	1.014	1.01-1.06	0.00
Sex			
Male	1.37	0.82-2.28	0.21
Female	Ref.		
Religious belief			
With religious belief	2.30	0.79-6.67	0.12
No religious belief	Ref.		
Do you have knowledge about bioethics?			
No	2.96	2.24-3.92	0.00
Yes	Ref.		
Have you heard, seen, or read about any cases of euthanasia?			
No	1.90	1.01-3.57	0.04
Yes	Ref.		
Have you witnessed any cases of euthanasia?			
Yes	1.90	1.01-3.57	0.04
No	Ref.		
Are you in favor of euthanasia?			
No	1.56	0.87-2.79	0.13
Yes	Ref.		

[§] Crude prevalence ratio.

Source: prepared by the authors.

Table 5. Multivariate analysis between general characteristics and knowledge about euthanasia in medical interns of the Ricardo Palma University in the period 2023-2024, using Poisson regression

	Euthanasia knowledge		
	RPa [§]	95%CI	p value
Age	1.01	0.98-1.05	0.40
Do you have knowledge about bioethics?			
No	2.56	1.66-3.95	0.00
Yes	Ref.		
Have you heard, seen, or read about any cases of euthanasia?			
Yes	0.88	0.36-2.14	0.78
No	Ref.		

[§] Adjusted prevalence ratio.

Source: prepared by the authors.

Discussion

Euthanasia is a highly complex issue, with profound moral, legal, bioethical, and religious implications, which has generated constant debate both in the medical community and in society in general. In this study, the knowledge and attitudes towards euthanasia in medical interns of a Peruvian university were analyzed, also evaluating the influence of factors such as religion, training in bioethics, and previous experience with real cases.

Regarding attitudes, it was shown that being in favor of euthanasia is associated with a higher probability of developing a positive stance towards this practice, suggesting that personal beliefs directly influence its acceptance. This finding agrees with Ramirez’s study⁸, who reported that 88.3% of Peruvian students had a negative attitude, based mainly on bioethical arguments and the conception of euthanasia as an attack on human life.

In contrast to Lachowski’s study which reports that more than a quarter of the students examined expressed support for the legalization of euthanasia in Poland; This attitude shows a conflict between one’s own convictions and legal norms, which, in the future exercise of the

medical profession, could make it difficult to make appropriate decisions in the treatment of seriously ill patients².

Regarding religion, 73.8% of those surveyed in this study identified themselves as Catholic, 16.5% as agnostic, 2.9% as evangelical, and 6.8% as belonging to other religions. This distribution coincides with that reported by D’Amico⁴, in which the Catholic religion predominated with 60.81%, followed by the evangelical with 18.45%. Mahnoor’s Studio¹⁰ concludes that most students opposed euthanasia and physician-assisted suicide (PAS) because of their religious beliefs and optimism about life. Similarly, Acosta-Quiroz and collaborators¹¹ point out that the acceptance of euthanasia is influenced by cultural factors, especially religion, as people with religious beliefs tend to oppose this practice; However, it is striking that, despite the fact that 73.8% of the participants identified themselves as Catholic, about 50% endorsed euthanasia, which contrasts with what was previously shown, indicating that there could be other factors involved.

In relation to bioethics training, 95.1% of the interns had received instruction in this area, 89.3% had done so at university, and only 5.8% had witnessed a real case of euthanasia. These results are comparable to those of Ramirez⁸, who found that 97.5% of the students had bioethical training, although 11.7% had been exposed to cases of euthanasia. This discrepancy suggests that, although theoretical training is extensive, practical experience is limited, which could hinder the effective application of bioethical knowledge; therefore, the need to strengthen the teaching of bioethics via methodologies that enable critical reflection and the simulation of real ethical dilemmas is evident.

Regarding the level of knowledge about euthanasia, 63.1% of the inmates had a high level, while 36.9% had a low level, which reveals a significant gap in the understanding of this topic. A study conducted in Brazil by Vilela and Caramelli¹² found that only 63.3% of medical specialists knew the definition of euthanasia, which reinforces the idea that academic training does not always guarantee in-depth knowledge. In contrast, Ramirez⁸ reported that 70.6% of

interns and resident physicians in Peru had a high level of knowledge, suggesting that factors such as the institutional context and curricular approach could influence knowledge acquisition.

No statistically significant association was found between the level of knowledge and attitudes towards euthanasia, which suggests that knowing more about the subject does not necessarily determine a specific position. This could be explained by the influence of personal factors such as values, religious beliefs, and previous experiences. However, this finding differs from the Lovera HF study and collaborators¹³, conducted in nursing students at the National University of the Peruvian Amazon, in which a correlation between knowledge and attitude was evidenced, which indicates the need to conduct more research that explores these relationships in different populations and professional contexts.

Nevertheless, a significant association was identified between knowledge in bioethics and a favorable attitude towards euthanasia. Although we did not find any studies that contradict this result, we believe that more research needs to be done on how this training influences decision-making in actual medical practice, as well as whether this influence is maintained over time. It is pertinent to explore whether future physicians, over the years, continue to critically reflect on these issues and manage to mature their positions in an ethical and conscious way.

A study conducted in Portugal with final-year medical students, during the period 2015-2016, found that the majority endorsed the legalization of euthanasia (73%) and assisted suicide (56%), and most of the respondents were young, single women with religious beliefs, and more than half had treated terminally ill patients. This study concluded that future Portuguese physicians showed a greater acceptance of euthanasia and assisted suicide compared to their peers in other European countries, which reinforces the importance of considering cultural and social particularities in medical training¹⁴.

Similarly, the study conducted by Rodríguez-Calvo and collaborators¹⁵ showed that the majority of respondents—students of medicine, law, and nursing—expressed a favorable attitude

towards euthanasia (75%) and medically assisted suicide (54%); Moreover, a statistically significant correlation was identified between these attitudes and the ethical principles that underpin them ($p < 0.001$), as well as between positive attitudes and willingness to participate in these procedures if they were legally allowed.

Nevertheless, research conducted in Brazil on the perceptions of health professionals regarding euthanasia revealed a diversity of opinions, both for and against. However, this finding must be interpreted considering that, in the Brazilian context, euthanasia is legally criminalized and there is a marked influence of religious values in society¹⁶. These conditions could restrict open debate about the practice, particularly in work settings, so it is plausible to assume that even professionals with favorable attitudes may experience profound ethical and emotional dilemmas at the prospect of engaging in these procedures, due to the fear of facing legal consequences or moral judgments.

The fact that being in favor of euthanasia is related to positive attitudes towards its implementation was predictable, given that personal beliefs have an important weight in the perception of this practice. This implies that future professionals who approve euthanasia may be more willing to consider it in clinical situations, which could eventually have an impact on their professional performance and their interaction with patients at the end of life.

Final considerations

Note that 63.1% of the medical interns had a low level of knowledge about euthanasia and 50.5% had a negative attitude towards this practice. Although there was no significant association between the level of knowledge and attitudes ($p > 0.05$), a statistically significant relationship was found between knowledge of bioethics and the level of knowledge about euthanasia ($p = 0.00$), as well as between having seen or read related cases and the level of knowledge about this procedure ($p = 0.00$). Among the limitations of this study is its cross-sectional design, which prevents establishing causality or extrapolating the results to other populations.

The findings of this research have relevant implications for medical education and clinical practice. First, they show that teaching about euthanasia and bioethics should not be limited to theoretical knowledge but should also address personal beliefs and attitudes. Second, they highlight the need for future physicians to be

aware of their ethical positions and to be prepared to act with respect and empathy towards patients in terminal situations. It is recommended that universities and the Medical College of Peru develop training programs and promote active research on euthanasia to improve the ethical and professional preparation of future physicians.

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Gianella Nicho-Conde participated in the conceptualization, research, methodological development, data analysis and interpretation, writing (original draft), critical review, editing and final approval. Mariela Vargas participated in the conceptualization, research, methodological development, data analysis and interpretation, clinical supervision, application of results, overall supervision, technical advice, writing (original draft), critical review, editing and final approval. Sonia Indacochea-Cáceda participated in the clinical supervision, application of results, general supervision, technical advice, writing (original draft), critical review, editing and final approval.

Data availability: All data used or generated in this study are described and presented in full in the body of the article.

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