Natural Resources for Human Health
eISSN: 2583-1194

Original Research

Received 01 May 2026
Revised 12 June 2026
Accepted 30 June 2026

Natural Resources for Human Health 2026, Vol. 6 (6s): 1217–1233

KEYWORDS:
health rights; university students; health literacy; autonomy; healthcare navigation; bioethics.

Knowledge and Perceptions of University Students Regarding Colombian Regulations Related to Health Rights

Hernan David Romero Reyes[1], Maria Milena Mejia Santanilla[2]

[1]Universidad de la Amazonia, He.romero@udla.edu.co ORCID:https://orcid.org/0009-0003-9124-3058
[2]Universidad de la Amazonia , Mari.mejia@udla.edu.co ORCID:https://orcid.org/0009-0000-7322-6631

ABSTRACT: Recognition of health rights is a fundamental component of autonomy, dignity, and informed access to healthcare services. In Colombia, the regulatory development concerning voluntary termination of pregnancy (VTP), palliative care, advance directives, euthanasia, and the right to die with dignity has expanded the guarantees available to citizens; however, evidence regarding university students' knowledge and perceptions of these rights remains limited. This study aimed to analyze knowledge of Colombian regulations related to health rights and to explore perceptions and factors associated with their recognition and navigation among university students. An observational, cross-sectional, descriptive, and analytical study was conducted with 610 undergraduate students from Universidad de la Amazonia. Descriptive and bivariate analyses were performed, with Benjamini-Hochberg adjustment for multiple comparisons, together with multivariable models to identify factors associated with recognition and navigation. Students showed greater recognition of voluntary termination of pregnancy and euthanasia, whereas palliative care and advance directives showed lower levels of familiarity. The recognition index was higher than the navigation index (2.60 vs. 2.16; $p < 0.001$), revealing a gap between knowing that health rights exist and knowing how to seek guidance for exercising them. Academic faculty was the main factor associated with both recognition and navigation after multivariable adjustment, whereas academic progression was primarily associated with recognition. Participants also showed broad agreement regarding the importance of autonomy, understandable information, and education on health rights. These findings indicate that recognizing health rights does not necessarily ensure knowledge of the pathways required to exercise them. Universities may therefore serve as strategic settings for strengthening health-rights literacy through coordinated actions with health insurers, healthcare providers, and health authorities that integrate regulatory information, institutional guidance, and practical knowledge of access pathways.

INTRODUCCIÓN

Health rights constitute an essential component of the fundamental right to health. The Pan American Health Organization (2026) places the right to health at the highest level among human rights and recognizes it as legally binding; consequently, it is recognized in the Constitution of the World Health Organization (WHO).

In Colombia, Law 1751 of 2015 recognizes health as a fundamental and non-waivable right and represents one of the main mechanisms for guaranteeing autonomy, dignity, and equitable access to health services. Constitutional and jurisprudential developments over recent decades have progressively strengthened the recognition of rights related to decision-making at the

end of life, sexual and reproductive health, and respect for individual autonomy. Currently, there are legal and jurisprudential provisions concerning voluntary termination of pregnancy (IVE, by its Spanish acronym) (Ruling C-055 of 2022), palliative care under Law 1733 of 2014, advance directives under Resolution 2665 of 2018, and euthanasia as a means of exercising the right to die with dignity under Resolution 813 of 2026. Together, these provisions constitute the regulatory framework aimed at protecting autonomy and freedom of decision-making within the health system.

However, the legal recognition of these rights does not, by itself, guarantee their effective exercise. One of the main obstacles to the realization of health rights is the population's lack of knowledge regarding the relevant regulations (Abiiro et al., 2020), and, in some cases, a lack of knowledge even among healthcare professionals and healthcare service providers (Barrera et al., 2015). Limited access to information restricts individuals' ability to make informed decisions, obtain timely access to available services, and demand compliance with the guarantees established by current legislation (Roth-Cohen et al., 2021). This situation is particularly relevant in issues that are often accompanied by ethical, religious, cultural, and political debates, which may influence individual perceptions beyond existing legal knowledge (Lee & Park, 2025).

University students constitute a population of particular interest for the study of these issues, as they represent an important segment of the young population. University students are undergoing a process of professional and civic education in which they develop competencies related to critical thinking, decision-making, and the exercise of fundamental rights (Muhayimana, Ntalindwa, Uwase, Gerard, Niringiyumukiza, Ingabire, Nzabonimana, Kearns, Bazakare, Maniriho, de Dieu Habimana, et al., 2025).

In particular, students in the health sciences will play a future role in implementing these regulations within the healthcare system, whereas students from other disciplines will act as citizens, users of health services, and potential disseminators of information within their communities (Kene et al., 2023). Therefore, understanding the level of knowledge and perceptions of this population is essential for guiding educational strategies aimed at strengthening health literacy and the appropriation of rights. In this regard, universities constitute strategic settings for strengthening health literacy, civic education, and the appropriation of rights (Muhayimana, Ntalindwa, Uwase, Gerard, Niringiyumukiza, Ingabire, Nzabonimana, Kearns, Bazakare, Maniriho, de Dieu Habimana, et al., 2025).

Although studies in Colombia have explored attitudes toward euthanasia, voluntary termination of pregnancy, and the right to die with dignity, the studies identified have primarily focused on healthcare professionals (Montaño Villalba & Rodríguez Villamizar, 2013; Romero-Reyes & Puerto-Galindo, 2024a) and users of healthcare systems in general (Romero-Reyes et al., 2024). Few studies have comprehensively assessed knowledge of the broader set of Colombian regulations related to health rights while simultaneously examining the perceptions of students from diverse fields of knowledge. A substantial body of research has focused on sexual and reproductive rights, while relatively few studies have examined each of these rights individually. Among the identified findings are studies concerning the recognition of euthanasia as a right in 17 countries (Rios-González et al., 2018), knowledge and attitudes toward euthanasia among nursing students (Chiliquinga & Balarezo, 2026), and the recognition of advance directives among medical personnel (Acuña & Ribero, 2022). These studies have generally examined knowledge of individual rights independently and have focused primarily on healthcare professionals. This limitation makes it difficult to understand existing information gaps and to establish priorities for designing education programs on rights and citizenship in university settings.

Within this context, the present study aimed to analyze the level of knowledge regarding Colombian regulations related to health rights and to explore perceptions and factors associated with their recognition, as well as students' ability to navigate healthcare pathways and access these rights. The findings are expected to contribute to the identification of educational needs, strengthen institutional strategies for education on health rights, and provide evidence for the development of university policies aimed at promoting the informed exercise of these rights.

MATERIALS AND METHODS

Study Design

An observational, cross-sectional study with descriptive and analytical purposes was conducted to characterize university students' knowledge and perceptions regarding health rights recognized in Colombia and to explore their association with sociodemographic and academic characteristics.

Participants

The study population consisted of 7,752 undergraduate students enrolled in academic programs at the Universidad de la Amazonia during the 2026-1 academic period. A total of 610 students from 20 of the institution's 24 undergraduate academic programs voluntarily participated, representing 7.9% of the student population. The participation of students from 20 academic programs and different stages of their undergraduate education allowed for the inclusion of diverse academic profiles in the study. However, given the non-probabilistic nature of the sampling strategy, the sample was not assumed to be statistically representative of the student population, and the sample size was not interpreted in terms of a population margin of error.

Instrument

A structured self-report survey was administered to assess knowledge and perceptions regarding health rights related to voluntary termination of pregnancy (VTP), palliative care, advance directives (AD), euthanasia, and the right to die with dignity. The instrument included sociodemographic and academic variables, questions assessing familiarity with or recognition of these rights, knowledge of available guidance and institutional pathways, perceptions regarding autonomy and information about the guarantees associated with these rights, and a multiple-choice question concerning the key stakeholders responsible for disseminating information about these rights.

Procedure

Data were collected by administering the questionnaire to students from different academic programs at the Universidad de la Amazonia. Participation was voluntary and anonymous, and informed consent was obtained prior to participation. The data were coded and stored in a database for subsequent statistical analysis.

Statistical Analysis

Data analysis was performed using IBM SPSS Statistics, version 26. Initially, a descriptive analysis of the sociodemographic variables and questionnaire responses was conducted by calculating absolute frequencies, percentages, measures of central tendency, and measures of dispersion in order to characterize the sample and describe the distribution of the study variables.

For inferential analyses, some academic variables were recategorized to reduce category fragmentation, improve the stability of the estimates, and preserve their conceptual meaning. Academic programs were grouped according to their institutional affiliation with the faculties represented in the sample: basic sciences, agricultural sciences, accounting, economic and administrative sciences, education sciences, law, engineering, and health sciences. Additionally, semester levels were grouped into three stages of academic training: the foundational stage (semesters 1–4), the professionalization stage (semesters 5–7), and the advanced stage (semesters 8–10). This latter recategorization preserved the ordinal nature of the variable and allowed both the assessment of overall differences between stages using Pearson's chi-square test and the evaluation of potential monotonic trends associated with academic progression using ordinal measures of association. When contingency tables presented low expected frequencies, the assumptions of the chi-square test were examined and, when appropriate, alternative procedures or robust estimates based on Monte Carlo simulation with 50,000 samples were considered.

Given the ordinal nature of the academic stage variable, Kendall's tau-c was used to assess potential monotonic trends across the foundational, professionalization, and advanced stages. Spearman's rho coefficient was used to analyze the association between age and the ordinal indicators of knowledge, guidance, and perceptions. The Benjamini–Hochberg adjustment was applied to families of conceptually equivalent tests; for academic stage, global chi-square tests and ordinal trend analyses were adjusted separately.

For associations involving nominal categorical variables, such as sex, academic program, health insurance affiliation regime, and area of origin, Cramér's V coefficient was additionally calculated as a measure of effect size and the strength of categorical associations.

Given the number of bivariate tests performed across different variables, the Benjamini–Hochberg procedure was applied to control the false discovery rate (FDR) at 5%. Original p values were reported, and associations that remained statistically significant after adjustment were identified.

To explore factors associated with the evaluation of the principle of autonomy, an ordinal logistic regression model was

initially assessed. Because the test of the proportional odds assumption indicated evidence of an overall violation, mainly associated with the effect of sex across the different response thresholds, the outcome was recategorized for a complementary analysis using binary logistic regression. High levels of agreement (categories 4–5) were contrasted with the remaining categories (1–3). The "Prefer not to answer" option was treated as missing data. The models were adjusted for sex, age, academic stage, faculty, area of origin, and health insurance affiliation regime.

For synthesis purposes and multivariable analyses, two thematic indices were constructed by calculating the mean of their corresponding indicators. The recognition/familiarity index integrated indicators related to voluntary termination of pregnancy (VTP), palliative care, advance directives (AD), and euthanasia, whereas the guidance/navigation index integrated indicators related to the identification of relevant actors, services, or pathways for obtaining guidance or accessing these rights. Both indices retained a range from 0 to 4. In addition, specific thematic indicators were constructed to compare recognition and navigation regarding VTP with those related to end-of-life rights.

Within-individual differences between recognition and navigation, as well as between indicators related to VTP and end-of-life rights, were evaluated using paired comparisons. Mean differences with 95% confidence intervals were calculated, and the Wilcoxon signed-rank test was used as a complementary nonparametric test. Subsequently, multivariable linear regression models were fitted for the recognition and navigation indices, including sex, age, academic stage, faculty, area of origin, and health insurance affiliation regime as predictors. HC3 robust standard errors were used, and multicollinearity was assessed using the variance inflation factor (VIF). Analogous models were fitted for the specific indicators related to end-of-life rights.

Ethical Considerations

The study was conducted in accordance with the ethical principles established in the Declaration of Helsinki and Colombian regulations governing research involving human participants (Resolution 8430 of 1993 of the Ministry of Health and Social Protection). Participation was voluntary and preceded by the provision of informed consent. Anonymity and the confidentiality of the information were ensured, and personal data were processed in accordance with Law 1581 of 2012 and national provisions governing the protection of personal data.

RESULTS

A total of 610 undergraduate students from 20 of the 24 academic programs at the Universidad de la Amazonia participated in the study. The sample showed a balanced distribution by sex, with 297 women (48.7%) and 313 men (51.3%). Participants ranged in age from 16 to 51 years, with a mean age of 21.9 years and a median of 21 years. Students from all academic semesters were represented, with the highest participation among students in the eighth (14.3%), seventh (13.0%), and fifth semesters (12.5%). The academic programs with the highest representation were Veterinary Medicine and Animal Science (15.1%), Law (13.0%), and Systems Engineering (8.5%). Regarding health insurance coverage, 66.1% of participants belonged to the subsidized regime, followed by the contributory regime (26.1%), while 87.0% came from urban areas.

Level of Knowledge Regarding Regulations Related to Health Rights

Reported knowledge varied across the different health rights assessed. Euthanasia was the topic with the highest level of familiarity, with 75.7% of students reporting that they knew about it in general terms or knew where to seek guidance. Similarly, 74.6% reported being familiar with voluntary termination of pregnancy (VTP). In contrast, knowledge was considerably lower regarding palliative care (45.6%) and advance directives (AD) (37.2%), revealing substantial information gaps concerning these rights. Overall, lower levels of knowledge were observed regarding guidance and access pathways than regarding familiarity with the existence of the rights themselves.

Although a substantial proportion of students reported knowing about the existence of certain health rights, knowledge of the institutional pathways for accessing them was considerably lower. Only 15.7% indicated that they knew the pathway for accessing voluntary termination of pregnancy, 11.8% knew how to request information about palliative care, 10.5% knew where to seek guidance on preparing an advance directive, and 13.4% reported knowing how to obtain guidance regarding the right to die with dignity. In all cases, lack of knowledge or only superficial knowledge of the relevant healthcare pathways predominated. In other words, across all the rights analyzed, students predominantly lacked knowledge of the responsible institutions, administrative procedures, and access mechanisms established under Colombian regulations.

Participants' perceptions revealed broad consensus regarding the need to strengthen education on health rights. More than 80% agreed or strongly agreed that university students should receive clear information about these rights, regardless of their academic program. Likewise, most participants considered that healthcare services should provide understandable information, respect individuals' autonomy, and facilitate clear institutional pathways for accessing these rights. There was also broad agreement regarding the need for universities, Health Promotion Entities (EPS), and Healthcare Provider Institutions (IPS) to develop educational campaigns, spaces for dialogue, and reliable digital resources to promote knowledge of current regulations.

Students considered that dissemination of information about health rights should be a shared responsibility among universities, Health Secretariats, Health Promotion Entities (EPS), and Healthcare Provider Institutions (IPS), followed by healthcare professionals and institutional communication media.

Association Between Sex and Knowledge, Access to Information, and Perceptions Regarding Health Rights

The information obtained in the study was consolidated, and the most significant associations regarding health rights, perceptions, and healthcare pathways are presented in Table 1.

Table N°1 Association Between Sex and Knowledge and Perceptions Regarding Health Rights

Variable	Women, % in higher categories	Men, % in higher categories	χ^2	gl	p	V de Cramer	BH
Information about voluntary termination of pregnancy (VTP)	79,1	70,3	11,864	4	0,018	0,139	No
Guidance on where to seek care for VTP	62,0	50,5	11,321	4	0,023	0,136	No
Knowledge of advance directives (AD)	38,0	36,4	9,749	4	0,045	0,126	No
Healthcare services should explain rights in an understandable manner	84,2	78,9	15,894	5	0,007	0,161	Sí
Respect for autonomy	81,5	73,2	23,219	5	<0,001	0,195	Sí
Respectful, pluralistic, and ethical spaces for dialogue	84,2	75,7	17,903	5	0,003	0,171	Sí

Note. For knowledge/guidance variables, percentages correspond to the higher knowledge categories; for perception variables, percentages correspond to the higher agreement categories. Cramér's V was used as a measure of effect size. The BH column indicates whether the association remained statistically significant after adjustment for multiple comparisons using the Benjamini–Hochberg procedure.

The analysis of sex in relation to knowledge, guidance, and perception variables showed that most of the indicators assessed did not differ significantly between men and women. However, in the unadjusted analysis, statistically significant associations were identified between sex and the level of information regarding voluntary termination of pregnancy (VTP) ($\chi^2(4) = 11.864$; $p = 0.018$; Cramér's $V = 0.139$), identification of an institution, service, or healthcare professional to contact for guidance regarding VTP ($\chi^2(4) = 11.321$; $p = 0.023$; $V = 0.136$), and knowledge of advance directives (AD) ($\chi^2(4) = 9.749$; $p = 0.045$; $V = 0.126$). For the first two indicators, a higher proportion of women were concentrated in the higher VTP knowledge categories (79.1% of women vs. 70.3% of men). Regarding knowledge of where to seek guidance to exercise this right, women also showed higher levels of knowledge (62.0% vs. 50.5% among men).

Regarding AD, although knowledge of this right was statistically associated with sex, the overall proportions in the higher categories were similar among women (38.0%) and men (36.4%), indicating that the difference was related to the distribution across response categories rather than to greater knowledge in either group.

The most consistent associations were observed in the perceptions component regarding health rights. Statistically significant associations were found between sex and the perception that health rights should be explained by healthcare services in a more understandable manner ($\chi^2(5) = 15.894$; $p = 0.007$; $V = 0.161$), the importance attributed to respecting individual autonomy in sensitive health-related decisions ($\chi^2(5) = 23.219$; $p < 0.001$; $V = 0.195$), and the need to address these issues in respectful, pluralistic, and ethical dialogue spaces ($\chi^2(5) = 17.903$; $p = 0.003$; $V = 0.171$). For the latter two variables, a higher proportion of women (81.5%) than men (73.2%) were in the highest agreement categories regarding respect for autonomy. Similarly, regarding the promotion of pluralistic and respectful dialogue, women (84.2%) expressed a greater level of perceived need than men (75.7%).

Although the six associations presented were statistically significant in the initial analysis, all effect sizes were small (Cramér's V ranging from 0.126 to 0.196), indicating that sex accounted for a limited proportion of the observed differences. After applying the Benjamini–Hochberg procedure to control for multiple comparisons, the associations involving respect for autonomy, the need for pluralistic and ethical dialogue spaces, and the responsibility of healthcare services to provide understandable information remained statistically significant. Consequently, the findings suggest that sex-related differences were more consistent in the perception-related indicators than in the knowledge and guidance indicators.

Association Between Area of Origin and Knowledge and Perceptions Regarding Health Rights

Overall, no consistent pattern of association was identified between area of origin (urban or rural) and indicators of knowledge, guidance, or perceptions regarding health rights. In the unadjusted analyses, associations were observed between area of origin and the identification of an institution, service, or healthcare professional to contact for guidance regarding VTP ($\chi^2(4) = 13.724$; $p = 0.008$; Cramér's $V = 0.150$), as well as between area of origin and perceptions regarding the influence of personal, family, or religious beliefs on these rights ($\chi^2(5) = 11.423$; $p = 0.044$; $V = 0.137$). Both associations showed small effect sizes.

In the first case, 57.8% of participants from urban areas were in the higher knowledge categories regarding health rights, compared with 44.3% of those from rural areas. However, neither association remained statistically significant after adjustment for multiple comparisons using the Benjamini–Hochberg procedure. Therefore, the results do not provide evidence of robust differences according to area of origin.

Associations Between Health Insurance Affiliation Regime and Perceptions Regarding Health Rights

Table 2 presents the results of the analysis of the association between health insurance affiliation regime (subsidized, contributory, special regime, and uninsured) and perceptions regarding health rights.

Table N°2 Association Between Health Insurance Affiliation Regime and Perceptions Regarding Health Rights

Indicator	Monte Carlo p-value	Cramér's V	BH	Interpretation
Understandable information provided by healthcare services	0,046	0,117	No	Small individual association
Information provided without fear of judgment	0,035	0,122	No	Small individual association
Pluralistic and ethical dialogue	0,035	0,129	No	Small individual association

Noea: Due to the presence of expected frequencies below 5 in more than 20% of the cells in several contingency tables, statistical significance values were estimated using Monte Carlo simulation with 50,000 samples. None of the associations remained statistically significant after Benjamini–Hochberg adjustment.

The distribution of the sample by health insurance affiliation regime was predominantly represented by the subsidized regime

(66.1%), followed by the contributory regime (26.1%), whereas the special regime (4.4%) and uninsured participants (3.4%) were less represented in the study. Due to the small number of participants in the latter two categories, several contingency tables had more than 20% of expected frequencies below 5. Therefore, associations were assessed using Monte Carlo procedures. Individual analyses identified associations between health insurance affiliation regime and the perception that healthcare services should explain these rights in a more understandable manner (p_{MC} = 0.046; Cramér's V = 0.117), the possibility of requesting information without fear of being judged (p_{MC} = 0.035; V = 0.122), and the need for respectful, pluralistic, and ethical dialogue spaces (p_{MC} = 0.035; V = 0.129). Effect sizes were small, and none of the associations remained statistically significant after Benjamini–Hochberg adjustment. Therefore, no robust pattern was identified across the different health insurance affiliation regimes.

Association Between Academic Faculty and Knowledge and Guidance Regarding Health Rights

Given that students from 20 academic programs participated in the study, some of which had a small number of participants in the sample, statistical analysis of associations at the program level was limited, with more than 50% of the cells presenting expected frequencies below 5. Therefore, academic programs were grouped by faculty, as shown in Table 3.

Table N°3 Association Between Academic Faculty and Knowledge Regarding Health Rights

Indicator	χ^2	gl	Monte Carlo p-value	Cramér's V	BH-adjusted p-value	Result
Information about voluntary termination of pregnancy (VTP)	45,290	24	0,006	0,136	0,019	Significant
Where to seek guidance regarding VTP	43,284	24	0,010	0,133	0,026	Significant
Institutional pathway for VTP	49,337	24	0,002	0,142	0,009	Significant
Familiarity with palliative care	53,552	24	<0,001	0,148	0,002	Significant
Guidance regarding palliative care	57,988	24	<0,001	0,154	0,002	Significant
Guidance on preparing an advance directive (AD)	48,756	24	0,002	0,141	0,009	Significant
Guidance regarding the right to die with dignity	62,755	24	<0,001	**0,160**	<0,001	Significant

Note: Due to the presence of some low expected frequencies, statistical significance was assessed using Monte Carlo simulation. The Benjamini–Hochberg procedure was applied to control the false discovery rate.

Due to the large number of academic programs and the small sample sizes in some categories, the programs were regrouped according to their institutional affiliation with the seven faculties of the Universidad de la Amazonia represented in the sample. Statistically significant associations were identified between academic faculty and several indicators of knowledge and guidance regarding health rights. The differences remained statistically significant after Benjamini–Hochberg adjustment for information about voluntary termination of pregnancy (VTP) ($\chi^2(24) = 45.290$; p_{MC} = 0.006; V = 0.136), identification of where to seek guidance regarding VTP ($\chi^2(24) = 43.284$; p_{MC} = 0.010; V = 0.133), knowledge of the institutional pathway for VTP ($\chi^2(24) = 49.337$; p_{MC} = 0.002; V = 0.142), familiarity with palliative care ($\chi^2(24) = 53.552$; p_{MC} < 0.001; V = 0.148), guidance on requesting information about palliative care ($\chi^2(24) = 57.988$; p_{MC} < 0.001; V = 0.154), guidance on preparing an advance directive (AD) ($\chi^2(24) = 48.756$; p_{MC} = 0.002; V = 0.141), and guidance regarding the right to die with dignity ($\chi^2(24) = 62.755$; p_{MC} < 0.001; V = 0.160).

Although the effect sizes were small, a consistent pattern of higher proportions in the upper knowledge categories was observed among students affiliated with the Faculty of Law. In contrast, no robust associations were identified between academic faculty and perception variables related to autonomy, access to information, educational campaigns, or pluralistic

dialogue. This suggests greater differentiation across academic areas in the knowledge component than in general attitudes toward the guarantee of health rights.

Association and Trend According to Academic Stage

Semester levels (1–10) were grouped into three academic stages to facilitate the analysis and avoid low frequencies in some categories. A trend analysis was subsequently performed using Kendall's tau-c, together with the Benjamini–Hochberg adjustment procedure, as shown in Table 4.

Table N°4 *Association and Trend According to Academic Stage*

Indicator	Foundational Stage, %	Professionalization Stage, %	Advanced Stage, %	χ^2 *p*-value	Kendall's Tau-c	Trend *p*-value	BH-adjusted Trend *p*-value
Information about voluntary termination of pregnancy (VTP)	71,4	72,5	**80,8**	0,042	**0,115**	0,001	**0,013**
Guidance regarding palliative care	31,2	**38,7**	30,2	0,025	0,044	0,229	0,457
Familiarity with euthanasia	71,0	76,5	80,8	0,260	0,075	0,037	0,196
University-based educational campaigns	75,9	81,9	**86,8**	0,063	**0,113**	0,001	**0,013**

Note: Percentages correspond to the upper response categories. A positive Kendall's tau-c indicates a trend toward higher response levels as academic stage increases. The Benjamini–Hochberg adjustment was applied separately to the family of ordinal trend tests.

Semester levels were grouped into three academic stages: Foundational (semesters 1–4; n = 224; 36.7%), Professionalization (semesters 5–7; n = 204; 33.4%), and Advanced (semesters 8–10; n = 182; 29.8%). In the overall chi-square tests, nominally significant associations were observed for the level of information about voluntary termination of pregnancy (VTP) ($\chi^2(8) = 16.021$; $p = 0.042$; Cramér's V = 0.115) and guidance on requesting information about palliative care ($\chi^2(8) = 17.498$; $p = 0.025$; V = 0.120), although neither remained statistically significant after the Benjamini–Hochberg adjustment applied to the global tests.

Given the ordinal nature of academic stage, monotonic trends were additionally evaluated. A positive trend was identified in the level of information about VTP (Kendall's tau-c = 0.115; $p = 0.001$; p_{BH} = 0.013), with the proportion in the upper categories increasing from 71.4% in the Foundational Stage to 72.5% in the Professionalization Stage and 80.8% in the Advanced Stage. Likewise, a positive trend was observed in the perception of the need to develop university-based educational campaigns on health rights (Kendall's tau-c = 0.113; $p = 0.001$; p_{BH} = 0.013), with high-agreement proportions of 75.9%, 81.9%, and 86.8%, respectively. Both trends were small in magnitude but remained statistically significant after adjustment for multiple comparisons.

Academic stage showed a specific positive association with knowledge about VTP and recognition of the need for education on health rights within the university. However, this progressive pattern was not observed for the variables assessing access pathways and the other content domains evaluated.

Association Between Age and Knowledge and Perceptions Regarding Health Rights

The association between age and knowledge and perception indicators regarding health rights was assessed using Spearman's rho correlation coefficient, with Benjamini–Hochberg adjustment, as shown in Table 5.

Tabla N°5 Correlation Between Age and Selected Indicators of Knowledge and Perceptions Regarding Health Rights

Indicator	Spearman's ϱ	p-value	BH-adjusted p-value	Interpretation
Information about voluntary termination of pregnancy (VTP)	0,091	0,025	0,236	Very small exploratory association
Institutional pathway for VTP	0,107	0,008	0,154	Small exploratory association
Familiarity with palliative care	0,078	0,054	0,331	Not statistically significant
Familiarity with euthanasia	0,068	0,092	0,349	Not statistically significant
University-based educational campaigns	0,074	0,070	0,331	Not statistically significant

Note: None of the correlations remained statistically significant after the Benjamini–Hochberg adjustment.

Participants ranged in age from 16 to 51 years, with a median age of 21 years (IQR 20–23). Because age was analyzed as a quantitative variable and the knowledge and perception indicators were measured using ordinal scales, Spearman's correlation coefficient was used. In the unadjusted analyses, positive correlations were observed between age and the level of information about voluntary termination of pregnancy (VTP) ($\varrho = 0.091$; $p = 0.025$) and between age and knowledge of the institutional pathway for accessing VTP ($\varrho = 0.107$; $p = 0.008$). However, both associations were very small in magnitude, and neither remained statistically significant after the Benjamini–Hochberg adjustment. No robust correlations were identified between age and the remaining indicators of knowledge, guidance, and perceptions.

Additionally, age showed a positive correlation with academic semester ($\varrho = 0.541$; $p < 0.001$), indicating a substantial degree of correspondence between the two variables. Consequently, bivariate associations attributed to age should be interpreted with caution, as they may partially reflect academic progression. This possibility was subsequently considered in the multivariable models.

Stakeholders Considered Relevant for the Dissemination of Health Rights

Table 6 presents participants' perceptions regarding which stakeholders should be responsible for disseminating information about and updating knowledge of health rights.

Table N°6 Stakeholders Who Should Be Prioritized in the Dissemination of Health Rights

Stakeholder	n	% of Participants
University	**417**	**68,4**
Health Promotion Entities (EPS)	**361**	**59,2**
Health Secretariats	**283**	**46,4**
Healthcare Provider Institutions (IPS)/hospitals	239	39,2
Media	156	25,6
Healthcare professionals	143	23,4

Psychology professionals	117	19,2
Institutional social media	85	13,9
Legal professionals/student organizations	29	4,8

Note. This was a multiple-response question in which each participant selected the three stakeholders they considered most important for the dissemination of health rights. Therefore, the percentages do not add up to 100%.

In the multiple-response question regarding the stakeholders who should participate in the dissemination of health rights, each participant could select up to three stakeholders. The university was the stakeholder selected most frequently (n = 417; 68.4%), followed by Health Promotion Entities (EPS) (n = 361; 59.2%), Health Secretariats (n = 283; 46.4%), and Healthcare Provider Institutions (IPS) or hospitals (n = 239; 39.2%). Less frequently selected were the media (25.6%), healthcare professionals (23.4%), psychology professionals (19.2%), and institutional social media (13.9%). Overall, the findings indicate that participants attributed greater responsibility to institutional stakeholders involved in university education, health insurance, or healthcare delivery than to individual healthcare professionals or media outlets.

Multivariable Regression Models

Multivariable linear regression models were used to identify variables that remained associated in multivariable analyses, as shown in Table 7. For this purpose, the variables were grouped into two models: (1) recognition/familiarity with health rights and (2) guidance/navigation regarding health rights.

Table N°7 Multivariable Model of Health Rights Recognition and Navigation

Predictor	**Recognition B (95% CI)**	**p-value**	**Navigation B (95% CI)**	**p-value**
Professionalization vs. Foundational	0,182 (0,024–0,340)	0,024	0,164 (−0,016–0,344)	0,075
Advanced vs. Foundational	**0,235 (0,057–0,413)**	**0,010**	0,154 (−0,046–0,354)	0,131
Agricultural Sciences vs. Education	−0,119 (−0,307–0,069)	0,215	−0,101 (−0,323–0,120)	0,369
Basic Sciences vs. Education	0,242 (−0,031–0,516)	0,082	**0,354 (0,061–0,647)**	**0,018**
Law vs. Education	**0,456 (0,268–0,645)**	**<0,001**	**0,647 (0,424–0,870)**	**<0,001**
Engineering vs. Education	0,036 (−0,163–0,235)	0,722	0,054 (−0,168–0,275)	0,633
Health Sciences vs. Education	**0,354 (0,039–0,670)**	**0,028**	**0,476 (0,098–0,854)**	**0,014**

Note: Models were adjusted for sex, age, academic stage, area of origin, health insurance affiliation regime, and academic faculty. HC3 robust standard errors were used. For the recognition model, $R^2 = 0.086$ and adjusted $R^2 = 0.065$; for the navigation model, $R^2 = 0.101$ and adjusted $R^2 = 0.080$.

Two thematic indices were constructed by averaging the corresponding indicators: recognition, defined as familiarity with health rights (VTP, palliative care, advance directives, and euthanasia), and guidance/navigation for accessing these rights. The recognition index had a mean of 2.60 (SD = 0.76), which was higher than the navigation index (M = 2.16; SD = 0.90). The mean difference was 0.44 points (95% CI: 0.39–0.49; $p < 0.001$), and 73.1% of participants had a higher level of recognition than navigation. Both indices showed a strong positive correlation (Spearman's $\rho = 0.761$; $p < 0.001$), indicating that greater familiarity with health rights was associated with greater knowledge of access pathways, although the two dimensions were not equivalent.

In the multivariable linear regression models with HC3 robust standard errors, academic faculty remained associated with both overall knowledge (global $p < 0.001$) and navigation (global $p < 0.001$), after adjustment for sex, age, academic stage, area of origin, and health insurance affiliation regime. Compared with the Faculty of Education, the Faculty of Law had

higher adjusted scores for both recognition (B = 0.456; 95% CI: 0.268–0.645; p < 0.001) and navigation (B = 0.647; 95% CI: 0.424–0.870; p < 0.001). The Faculty of Health Sciences also showed higher scores for recognition (B = 0.354; 95% CI: 0.039–0.670; p = 0.028) and navigation (B = 0.476; 95% CI: 0.098–0.854; p = 0.014).

Academic stage remained globally associated with recognition (p = 0.023), with a higher score in the Advanced Stage compared with the Foundational Stage (B = 0.235; 95% CI: 0.057–0.413; p = 0.010), whereas it showed no independent association with navigation (global p = 0.166). Sex, age, area of origin, and health insurance affiliation regime did not show robust global associations with either index.

Comparison Between Recognition and Navigation of Health Rights

A thematic comparison was performed between health rights related to voluntary termination of pregnancy (VTP) and those related to end-of-life care to determine whether the relationship between recognition and navigation was consistent across these rights, as shown in Table 8.

Table N°8. Thematic Comparison

Dimension	VTP, M (SD)	End-of-Life, M (SD)	Mean Difference	95 % CI	p-value
Recognition	**2,98 (0,97)**	2,48 (0,81)	**0,50**	0,43–0,57	<0,001
Navigation	**2,38 (1,05)**	2,02 (0,96)	**0,36**	0,29–0,43	<0,001
Recognition–Navigation Gap	0,60	0,46	0,14	0,07–0,22	<0,001

***Note*:** Higher values indicate greater recognition or guidance/navigation. Comparisons were performed within participants.

Thematic indicators of recognition and navigation were constructed to compare content related to voluntary termination of pregnancy (VTP) with palliative care, advance directives (AD), euthanasia, and the right to die with dignity. Participants showed greater recognition of VTP (M = 2.98; SD = 0.97) than of end-of-life-related rights (M = 2.48; SD = 0.81), with a mean difference of 0.50 points (95% CI: 0.43–0.57; p < 0.001). Likewise, the navigation index was higher for VTP (M = 2.38; SD = 1.05) than for end-of-life rights (M = 2.02; SD = 0.96), with a difference of 0.36 points (95% CI: 0.29–0.43; p < 0.001).

In both domains, recognition exceeded navigation. However, the recognition–navigation gap was slightly greater for VTP (0.60 points) than for end-of-life rights (0.46 points; p < 0.001). This indicates that the lower performance regarding end-of-life rights was mainly related to a generally lower level of knowledge rather than to a proportionally greater loss between recognition and the practical guidance required to exercise these rights.

In the specific multivariable models for end-of-life-related rights, academic faculty remained associated with both recognition (global p < 0.001) and navigation (global p < 0.001). Compared with the Faculty of Education, the Faculty of Law had higher adjusted scores for recognition (B = 0.457; 95% CI: 0.254–0.661; p < 0.001) and navigation (B = 0.664; 95% CI: 0.422–0.905; p < 0.001). The Faculty of Health Sciences showed a higher navigation score (B = 0.622; 95% CI: 0.220–1.024; p = 0.002), whereas its difference in recognition did not reach conventional statistical significance (B = 0.355; 95% CI: −0.003–0.713; p = 0.052). Academic stage remained associated with recognition of end-of-life rights (global p = 0.036), but not with navigation (global p = 0.097).

Complementary Analysis of Perceptions Regarding Autonomy

For the item related to respect for autonomy, the "Prefer not to answer" option was treated as missing data. Among participants with valid responses, 77.9% selected the agree or strongly agree categories. Because the proportional odds assumption was violated in the ordinal model initially considered, a complementary analysis was conducted using binary logistic regression, distinguishing high agreement (categories 4–5) from categories 1–3.

After adjustment for age, academic stage, faculty, area of origin, and health insurance affiliation regime, women had higher odds of being in the high-agreement categories than men (OR = 1.59; 95% CI: 1.06–2.40; p = 0.026), whereas participants from rural areas had lower odds than those from urban areas (OR = 0.49; 95% CI: 0.29–0.84; p = 0.010). These findings were

considered complementary and should be interpreted with caution given the model's limited overall explanatory capacity.

DISCUSSION

The findings showed that knowledge of health rights among students at Universidad de la Amazonia was not homogeneous and that there was a relevant difference between recognizing a right and knowing how to navigate the pathway through which that right can be operationalized. Although the recognition and navigation indices were strongly correlated, recognition scores were significantly higher than navigation scores, and recognition exceeded navigation in 73.1% of participants. This finding suggests that knowledge of health rights should extend beyond regulatory familiarity. A person may have heard about a right and understand its meaning without necessarily identifying the institutions responsible for guaranteeing its exercise or knowing how to access the guidance pathways required to exercise it. This distinction between two different concepts is consistent with the contemporary concept of health literacy, which is not limited to access to information but encompasses the ability to access, understand, appraise, and use health information and services (World Health Organization, 2025).

In this regard, the findings suggest the existence of a gap between recognition of health rights and knowledge of the pathways for accessing those rights. This interpretation is useful for understanding the findings without assuming that lack of knowledge belongs exclusively to the individual sphere or generalizing this limitation to the entire population. In relation to limited knowledge of health rights, the WHO indicates that health literacy is shaped by personal competencies, institutional structures, and the availability of resources needed to access, understand, and use information and health services in a timely manner. It also attributes responsibility to information providers, health services, governments, educational institutions, and other stakeholders that can make information understandable and accessible (World Health Organization, 2025). Therefore, limited navigation capacity regarding health rights may reflect both individual knowledge gaps and limitations in the visibility and accessibility of institutional pathways for exercising these rights.

Differences Between VTP and End-of-Life-Related Rights

The thematic comparison showed a consistent pattern of greater recognition and navigation of voluntary termination of pregnancy (VTP) compared with rights related to the end of life. Mean recognition of VTP was 2.98, compared with 2.48 for end-of-life rights, while navigation scores were 2.38 and 2.02, respectively. However, the findings also allow for a more nuanced interpretation of the initial assumption: the recognition–navigation gap was not greater for end-of-life rights, but was slightly greater for VTP. Thus, the lower performance regarding palliative care, advance directives (AD), and the right to die with dignity appears to begin with a lower level of familiarity rather than being explained exclusively by the transition from knowing that a right exists to knowing how to exercise it.

The greater familiarity with VTP may be related to the greater presence of sexual and reproductive health in educational, preventive, and research processes directed toward adolescents and young adults. Colombian literature involving university populations has focused extensively on sexuality, practices, and sexual and reproductive rights. Studies among Colombian university students have documented both exposure to these topics and persistent gaps in knowledge and practices, while recent international research continues to report important limitations in sexual and reproductive health literacy among university students (Kelecha et al., 2024). For example, studies among university students in Rwanda have identified differences in knowledge of sexual and reproductive rights according to academic characteristics, reinforcing the importance of access to information within educational settings (Muhayimana et al., 2025).

However, greater knowledge of VTP should not be interpreted solely as an effect of age or greater proximity within the life course. It is also plausible that sexual and reproductive rights may be perceived as more personally relevant to a young university population than decisions involving advanced illness or the end of life. Nevertheless, the present study did not measure perceived vulnerability, proximity to death, or personal relevance of these topics. Therefore, this interpretation should be considered a hypothesis derived from the observed findings rather than a directly tested explanation. Qualitative research on meanings of health among university populations in Colombia has shown that youth experiences are shaped around ways of living in the present, care, and risk, providing a possible framework for understanding the lower perceived relevance of certain end-of-life-related topics (Rojas, 2004).

The lower familiarity with AD is particularly relevant because this mechanism is not limited to people who are terminally ill. Its purpose is related to anticipating decisions concerning the end of life and exercising autonomy in health-related decisions.

In addition, international studies on end-of-life decision-making have found that even highly educated adult populations may have limited knowledge of advance directives, while knowledge of palliative care remains far from universal (Ortiz-Gonçalves et al., 2018). In Colombia, there is also specific evidence regarding knowledge of euthanasia among university students, confirming that this topic has been explored, although the literature identified is considerably smaller than that available on sexual and reproductive health (Velásquez-Portilla et al., 2020). This uneven distribution of the literature supports the relevance of integrating VTP, palliative care, AD, euthanasia, and guidance pathways within a single study rather than evaluating each right in isolation.

Academic Context as the Main Differentiating Factor

One of the most important findings of the present study was the influence of academic context on knowledge of health rights. After adjustment for sex, age, academic stage, health insurance affiliation regime, and area of origin, academic faculty remained associated with both recognition and navigation. This pattern was also reproduced in the specific models addressing end-of-life-related rights. In contrast, age, area of origin, health insurance affiliation regime, and sex showed less consistent associations as general differentiating factors. The convergence between bivariate and multivariable analyses suggests that academic and disciplinary exposure, potentially including curricular experiences, may play a more relevant role than some sociodemographic characteristics in the acquisition of knowledge related to health rights.

The higher levels observed among law students are particularly noteworthy. Compared with students in Education, students in Law had higher scores for both recognition and navigation, including content related to end-of-life rights. This finding may be compatible with greater exposure to regulatory frameworks, case law, fundamental rights, or institutional analysis. However, the study did not assess curricular content, courses completed, or specific educational experiences; therefore, the observed differences cannot be attributed directly to the curriculum. Similarly, students in Health Sciences showed higher scores in several navigation indicators, particularly those related to end-of-life rights, which is consistent with potentially greater exposure to clinical situations. Nevertheless, this interpretation remains hypothetical because curricular exposure was not directly assessed. Literature on university bioethics education has emphasized that educational processes should contribute to the development of knowledge and reasoning applied to issues involving autonomy, diversity, and health-related decision-making (Aldana de Becerra et al., 2020; Paragis et al., 2023).

Academic stage showed a different pattern: it was associated with greater recognition but not with navigation to the same extent. In the adjusted models, students in the Advanced Stage had higher recognition scores than students in the Foundational Stage, whereas no equivalent association was observed for navigation. This suggests that progression through university may increase knowledge about health rights but does not necessarily ensure that students acquire the practical knowledge required to access these rights or identify the corresponding pathways. This distinction reinforces the need to differentiate between information-oriented education and action-oriented health literacy.

Autonomy and the Cross-Cutting Nature of Perceptions

In contrast to knowledge, perceptions related to autonomy, understandable information, and the need for dialogue showed a high degree of consensus. The sex differences that remained significant after the Benjamini–Hochberg adjustment were concentrated precisely in these perceptual dimensions and had small effect sizes. This suggests that favorable attitudes toward autonomy and understandable information may be relatively widespread among students, even when practical knowledge of health rights is uneven.

This finding is relevant because a favorable disposition toward rights does not necessarily imply sufficient knowledge to exercise them. Conceptually, a person may recognize the importance of autonomy, consider understandable information necessary, and support the existence of institutional pathways while still not knowing where to seek guidance regarding AD, palliative care, or the right to die with dignity. This distinction between normative valuation and operational capacity reinforces the interpretation of the findings from a health literacy perspective: the WHO emphasizes that having information is insufficient if individuals cannot understand, appraise, and use it to interact effectively with health services(Organización Mundial de la salud, 2025).

The Information Gap May Also Exist Among Those Responsible for Providing Guidance

The present findings become particularly relevant when considered alongside previous research conducted by the authors

among other actors within the health system. Among physicians in Florencia, knowledge gaps were identified regarding health rights and mechanisms such as AD, euthanasia, and VTP, suggesting that limited knowledge is not necessarily restricted to service users (Romero-Reyes & Puerto-Galindo, 2024b). Similarly, a previous study conducted among health system users in Florencia identified difficulties related to knowledge of rights associated with dying with dignity (Romero-Reyes et al., 2024).

The convergence of these studies should be interpreted cautiously because they involved different samples and study designs and do not allow the magnitude of the phenomenon at the national level to be estimated. Nevertheless, taken together, they suggest an important issue: information gaps may occur both among those who need to exercise their rights and among those who may be expected to provide guidance regarding access to those rights. This situation may constitute a barrier even before a formal request for a service is made. If a person does not know that a right exists or does not know the relevant pathway, they may never request it; similarly, if the professional receiving the inquiry has incomplete knowledge, the guidance provided may be insufficient. International studies on the implementation of rights and health communication have likewise identified professional knowledge as an important condition for appropriate patient guidance and the effective implementation of health policies (Safeer et al., 2025).

Accordingly, the findings allow discussion of a possible dual information barrier: one associated with citizens' knowledge and navigation capacity, and another related to the professional and institutional capacity to provide information and guidance. This interpretation broadens the problem from an individual perspective to a systemic health literacy perspective. The WHO explicitly emphasizes the need to strengthen professional and organizational health literacy through regular training, improved communication processes, informed decision-making, and access to culturally and linguistically appropriate information.

University and Health System: Complementary Roles

A particularly relevant finding was that the university was the stakeholder most frequently selected as a priority for participating in the dissemination of these rights (68.4%), followed by EPS (59.2%), Health Secretariats (46.4%), and IPS/hospitals (39.2%). This finding should not be interpreted as indicating that students attributed legal responsibility for guaranteeing these rights to the university, because the question assessed who should participate as a priority in their dissemination, not which institution has the legal authority to guarantee each specific service.

Rather, the finding may indicate that the university occupies a privileged position as a close and potentially trusted setting for educating young people about health rights. The WHO explicitly recognizes the role of educational settings, including higher education, in developing personal health literacy and argues that health promotion requires multisectoral participation rather than relying exclusively on the health sector. Therefore, the most appropriate interpretation is not university instead of EPS, IPS, or health authorities, but rather university in coordination with these stakeholders.

From this perspective, the university could function as an educational and health-literacy channel, while EPS, IPS, and health authorities retain their respective roles in operational guidance, service provision, and institutional guarantees. Such coordination could help reduce the gap observed between recognition and navigation through strategies that go beyond explaining that a right exists and instead teach students what the right means, which actors are involved, where to seek information, and how to activate the corresponding pathway.

IMPLICATIONS

The findings suggest that educational interventions should move beyond exclusively informational campaigns toward health literacy strategies focused on the exercise of health rights. This would involve integrating at least four components for each right: recognition of the right, understanding of its scope, identification of the relevant institutional stakeholder, and practical knowledge of the corresponding pathway. This approach is consistent with contemporary health literacy frameworks, which incorporate navigation, access to services, and the ability to use information to make informed decisions.

Furthermore, given that the most consistent differences were associated with academic faculty and, to a lesser extent, with academic progression, university-based strategies should be cross-cutting and should not be restricted to Health Sciences or Law programs. Basic training in health rights could be incorporated through student welfare services, citizenship courses, bioethics, institutional orientation programs, digital resources, and community outreach activities, complemented by pathways verified by EPS, IPS, and health authorities.

STRENGTHS AND LIMITATIONS

The strengths of this study include the participation of 610 students from 20 academic programs, the integrated assessment of several health rights, and the distinction between familiarity and navigation. In addition, the analysis incorporated effect sizes, adjustment for multiple comparisons, Monte Carlo procedures in the presence of sparse contingency tables, and multivariable models to explore the independence of the observed associations.

Nevertheless, the findings should be interpreted in light of several limitations. The sampling was non-probabilistic and was conducted at a single university; therefore, the findings cannot be statistically generalized to all university students in Colombia. The cross-sectional design allows associations to be identified but does not establish causal relationships. The responses were self-reported and may have been influenced by recall, subjective interpretation, or social desirability bias. Additionally, although the thematic indices allowed recognition and navigation to be summarized, they were not developed as psychometric scales designed to measure a latent construct. Finally, some of the proposed interpretations—such as the possibility that sexual and reproductive health may have greater subjective proximity during youth or that specific curricular content may influence knowledge—were not directly assessed and should be explored in future research.

Multicenter studies involving public and private universities from different regions of Colombia would help determine whether the patterns identified are reproduced in other contexts. It would also be relevant to directly examine curricular exposure, sources of information, trust in different institutional stakeholders, and participants' objective ability to identify relevant pathways, as well as to simultaneously compare students, healthcare users, healthcare professionals, and institutional decision-makers.

CONCLUSIONS

The study showed that university students' knowledge of the health rights assessed was heterogeneous and that there was a relevant difference between recognizing the existence of a right and knowing the pathways or mechanisms through which guidance can be obtained to exercise it. Although participants showed greater familiarity with voluntary termination of pregnancy (VTP) and euthanasia, knowledge of palliative care, advance directives (AD), and the pathways associated with the right to die with dignity was comparatively lower. Overall, the findings identify a gap between recognition of health rights and the health literacy required to exercise them in an informed manner.

Academic context was the main differentiating factor in levels of knowledge and navigation. Academic faculty remained associated with both components after adjustment for sociodemographic variables, whereas academic progression was mainly associated with greater recognition but not consistently with knowledge of access pathways. These findings suggest that educational exposure may play an important role in the appropriation of health rights, although its influence does not appear to be restricted exclusively to Health Sciences programs.

Perceptions related to autonomy, access to understandable information, and the need for spaces for dialogue generally showed high levels of agreement, indicating that favorable attitudes toward the guarantee of rights may coexist with important gaps in operational knowledge. This distinction reinforces the need to move beyond strategies focused solely on informing students about the existence of rights and toward educational processes that enable them to understand their scope, identify the institutional stakeholders involved, and recognize the pathways available to seek guidance or access services.

The university was identified by participants as the main stakeholder that should participate in disseminating these rights, followed by EPS, Health Secretariats, and IPS. This finding highlights the potential of higher education institutions as settings for health-rights literacy, in coordination with the stakeholders responsible for health insurance, healthcare delivery, and health authority functions. The university does not replace the responsibilities of the health system but can make a significant contribution to reducing the gap between regulatory knowledge and navigation capacity.

Accordingly, cross-cutting university-based strategies for health-rights education should be developed, incorporating not only regulatory information but also practical guidance regarding pathways, competent institutions, and access mechanisms. These initiatives should involve students from all fields of knowledge and be coordinated with EPS, IPS, and health authorities. Future multicenter studies using probabilistic designs will help determine whether the patterns observed are reproduced in other institutions and regions, as well as deepen understanding of the curricular, institutional, and social factors involved in health literacy for the effective exercise of health rights.

REFERENCES

[1] Abiiro, G., Alhassan, F., Alhassan, B. P., Alhassan, B. P., & Akanbang, B. (2020). Socio-demographic correlates of public awareness of patient rights and responsibilities in the Sagnarigu Municipality, Ghana. *International Journal of Health Promotion and Education*, *60*, 38-48. https://doi.org/10.1080/14635240.2020.1836994

[2] Acuña, A. M. Á., & Ribero, Ó. F. G. (2022). Advance Directives Document: Knowledge and experiences of healthcare professionals in Colombia. *Colombian Journal of Anesthesiology*, *50*(2). https://doi.org/10.5554/22562087.e1012

[3] Aldana de Becerra, G. M., Tovar Riveros, B. E., Vargas, Y., Joya Ramírez, N. E., Aldana de Becerra, G. M., Tovar Riveros, B. E., Vargas, Y., & Joya Ramírez, N. E. (2020). Formación bioética en enfermería desde la perspectiva de los docentes. *Revista Latinoamericana de Bioética*, *20*(2), 121-142. https://doi.org/10.18359/rlbi.5063

[4] Barrera, C. R., Negrón, C., Barría, R. M., & Méndez, C. (2015). Rights and duties policy implementation in Chile: Health-care professionals' perceptions. *Health Expectations : An International Journal of Public Participation in Health Care and Health Policy*, *19*, 1062-1070. https://doi.org/10.1111/hex.12396

[5] Chiliquinga, C. E. M., & Balarezo, G. M. S. (2026). Conocimientos y actitudes sobre la eutanasia en estudiantes de la carrera de Enfermería. *Enfermería Cuidándote*, *9*, 31-41. https://doi.org/10.51326/ec.9.3125189

[6] *Derechos Humanos y Salud—OPS/OMS | Organización Panamericana de la Salud*. (2026, junio 19). https://www.paho.org/es/temas/derechos-humanos-salud

[7] Estatutaria, L. (s. f.). *POR MEDIO DE LA CUAL SE REGULA EL DERECHO FUNDAMENTAL A LA SALUD Y SE DICTAN OTRAS DISPOSICIONES*.

[8] Kelecha, Y. T., Mehammud, B. M., Goda, H. S., & Toma, T. M. (2024). *Reproductive and sexual health literacy and associated factors among late-adolescent high school students in Arba Minch and Sawla towns, Southern Ethiopia, 2023: A cross-sectional study*. https://doi.org/10.1136/bmjopen-2024-086034

[9] Kene, C., Geta, G., Ejigu, N., & Desta, F. (2023). Knowledge of Sexual and Reproductive Health Rights Among University Students: A Cross-Sectional Study in Southeast Ethiopia. *Adolescent Health, Medicine and Therapeutics*, *14*, 1-12. https://doi.org/10.2147/AHMT.S394883

[10] Lee, Y., & Park, J. (2025). When politics meets policy: A realist review of how political context shapes the impact of public health legal interventions. *Frontiers in Public Health*, *13*, 1601467. https://doi.org/10.3389/fpubh.2025.1601467

[11] Montaño Villalba, L. E., & Rodríguez Villamizar, L. A. (2013). Conocimientos sobre derechos y deberes en salud en profesionales de medicina y enfermería, Bucaramanga, Colombia: Conocimientos sobre derechos-deberes en salud. *Revista de la Universidad Industrial de Santander. Salud*, *45*(1), 15-22.

[12] Muhayimana, A., Ntalindwa, T., Uwase, A., Gerard, K., Niringiyumukiza, J. D., Ingabire, A. J. de la C., Nzabonimana, E., Kearns, I. J., Bazakare, M. L. I., Maniriho, F., de Dieu Habimana, J., Bagweneza, V., & Nduwingoma, M. (2025). Knowledge of sexual and reproductive health and rights among University of Rwanda students: A cross-sectional study. *BMJ Public Health*, *3*(2), e001607. https://doi.org/10.1136/bmjph-2024-001607

[13] Muhayimana, A., Ntalindwa, T., Uwase, A., Gerard, K., Niringiyumukiza, J. D., Ingabire, A. J. de la C., Nzabonimana, E., Kearns, I. J., Bazakare, M. L. I., Maniriho, F., Habimana, J. de D., Bagweneza, V., & Nduwingoma, M. (2025). Knowledge of sexual and reproductive health and rights among University of Rwanda students: A cross-sectional study. *BMJ Public Health*, *3*(2). https://doi.org/10.1136/bmjph-2024-001607

[14] Organización Mundial de la salud. (2025). *Alfabetización en materia de salud* . https://www.who.int/es/news-room/fact-sheets/detail/health-literacy

[15] Ortiz-Gonçalves, B., Albarrán Juan, E., Labajo González, E., Santiago-Sáez, A., & Perea-Pérez, B. (2018). End-of-life decisions: Results of the expert-validated questionnaire. *Gaceta Sanitaria*, *32*(4), 333-338. https://doi.org/10.1016/j.gaceta.2017.09.011

[16] Paragis, M. P., Maier, A. T., González Pla, F., Michel Fariña, J. J., Paragis, M. P., Maier, A. T., González Pla, F., &

Michel Fariña, J. J. (2023). La enseñanza de la bioética en el ámbito universitario: El desafío de la educación a distancia. *Revista Latinoamericana de Bioética*, *23*(1), 85-99. https://doi.org/10.18359/rlbi.6037

[17] Rios-González, C. M., De Benedictis-Serrano, G. A., Córdova-Rivas, G. J., Contreras-Romero, M. L., Contreras-Lugo, L. V., Rios-González, C. M., De Benedictis-Serrano, G. A., Córdova-Rivas, G. J., Contreras-Romero, M. L., & Contreras-Lugo, L. V. (2018). Conocimiento y percepción sobre eutanasia en estudiantes de medicina de diecisiete países latinoamericanos, 2017. *Memorias del Instituto de Investigaciones en Ciencias de la Salud*, *16*(3), 58-65. https://doi.org/10.18004/mem.iics/1812-9528/2018.016(03)58-065

[18] Rojas, A. C. N. (2004). *JÓVENES UNIVERSITARIOS Y SALUD «VIVIR LA UNIVERSIDAD» Investigación sobre la salud y sus significados para jóvenes estudiantes universitarios*. https://ridum.umanizales.edu.co/server/api/core/bitstreams/00ba82b7-e0dd-410a-b727-e2c623a16dc1/content?utm_source=chatgpt.com

[19] Romero-Reyes, H. D., & Puerto-Galindo, G. (2024a). Conocimientos del personal médico sobre derechos de servicios de salud de Florencia, Caquetá 2024. *Dékau Perú*, *2*(1), 32-46. https://doi.org/10.55996/dekape.v2i1.280

[20] Romero-Reyes, H. D., & Puerto-Galindo, G. (2024b). Conocimientos del personal médico sobre derechos de servicios de salud de Florencia, Caquetá 2024. *Dékau Perú*, *2*(1), 32-46. https://doi.org/10.55996/dekape.v2i1.280

[21] Romero-Reyes, H. D., Vargas, A. D. H., & Martinez, E. A. G. (2024). *Conocimiento de los derechos como garantía de acceso a una muerte digna en usuarios del sistema de salud de Florencia Caquetá* [Text.Chapter]. Religacion Press. https://doi.org/http://doi.org/10.46652/reli-gacionpress.187.c285

[22] Roth-Cohen, O., Levy, S., & Zigdon, A. (2021). The Mediated Role of Credibility on Information Sources and Patient Awareness toward Patient Rights. *International Journal of Environmental Research and Public Health*, *18*(16), 8628. https://doi.org/10.3390/ijerph18168628

[23] Safeer, D., Wijerathne, S., Weerasekara, P., Wickramasinghe, U., Edirisinghe, S., Hewavithana, A., Chandraratne, N., & Jayasinghe, S. (2025). Aspects of patient rights in a developing country: A qualitative study. *BMC Medical Ethics*, *26*(1), 69. https://doi.org/10.1186/s12910-025-01232-2

[24] Velásquez-Portilla, M., Espejo-Saavedra, A., Navarrete-Ospina, F., Robledo-Gómez, S., Salazar-Jaramillo, M., Baquero-García, P., Buesaquillo, C., Laura, A., Burbano, L., Andrade, L., Calvache, J. A., & de-Vries, E. (2020). *Conocimientos acerca de la eutanasia en estudiantes universitarios en dos instituciones de educación superior en Colombia*.https://revistas.javeriana.edu.co/filesarticulos/UMED/621%20%282021%29/231065115017/?utm_source=chatgpt.com