

FORMATIONAL AND SOCIAL IMPACTS OF ACADEMIC LEAGUES IN HEALTH: SYSTEMATIC REVIEW

IMPACTOS FORMATIVOS E SOCIAIS DAS LIGAS ACADÊMICAS EM SAÚDE: REVISÃO SISTEMÁTICA

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Abstract: Academic Leagues (LAs) are student groups that promote teaching, research, and community outreach, providing practical and humanized learning experiences. They emerged in Brazil in 1920 with the goal of offering free medical care and have since played a key role in developing clinical and management skills. **Objective:** to analyze the contributions of Academic Leagues, highlighting their formative and social impacts, based on research conducted between March and May 2025 on the BVS, SciELO, and Google Scholar platforms. **Methodology:** this is a systematic review study conducted according to the Preferred Reporting Items for Systematic Review Protocols (PRISMA) guidelines. **Results:** 78 records were found on BVS, with 3 articles selected; 6 articles were identified on SciELO, with 1 selected; and 922 articles were screened on Google Scholar, resulting in 7 selected, totaling 11 articles in the review. LAs contribute to the education of medical students by reinforcing theoretical knowledge with practical activities and fostering the connection between the university and society. However, they face challenges such as limited focus on research in certain regions, excessive workload, and difficulties in implementing outreach projects. **Conclusion:** Despite these challenges, LAs have a positive impact on both student training and the wider

community.

Keywords: Medicine. College student. Medical education. Professional Training in Health. Curriculum.

INTRODUCTION

Academic Leagues (LAs) are groups formed by undergraduate students, under faculty supervision, that promote educational activities, research, and outreach projects, expanding learning beyond the standard curriculum.¹ The leagues' activities are both theoretical and practical, involving seminars, events, classes, discussions, and patient care. These initiatives benefit the community and provide students with practical learning, academic enrichment, and better preparation for patient-centered care ².

Academic leagues are based on the three pillars of higher education—teaching, research, and community engagement—which are essential to the university. These pillars enable students to develop autonomy, competence, and ethical standards effectively. In this context, the leagues serve as institutions that promote learning and disseminate knowledge across various sectors of society. ³

The 1988 Constitution of the Federative Republic of Brazil recognizes outreach activities as an opportunity for educational institutions to exercise their pedagogical and scientific autonomy, as well as their financial, administrative, and asset management autonomy, while always respecting the principle of the indivisibility of teaching, research, and extension ⁴. University outreach, in turn, is an interdisciplinary process that encompasses educational, cultural, scientific, and political aspects, promoting a transformative interaction between the university and other sectors of society. One way to inform the population about certain topics is through health education, which facilitates the exchange of knowledge tailored to the community's needs ⁴.

The first Brazilian Academic Medical League (LAM) was founded in 1920 at the USP School of Medicine, with an initial focus on supporting the population. Over time, the growth of LAMs was driven by the promotion of extracurricular activities and the emphasis on teaching, research, and community outreach in academic training, especially following the 1988 Constitution and the 2014 Curriculum Guidelines, which increased interest in practical training during undergraduate studies ⁵.

The National Curriculum Guidelines (DCN) for Medical Programs highlight essential attributes for the training of physicians, such as a generalist, critical, and reflective approach. To this end, it is necessary to implement mechanisms such as tutoring, internships, research initiation

programs, community outreach, and continuing education courses. In this context, Academic Leagues have distinguished themselves over the years⁶.

Medical education should encompass Health Care, Health Management, and Health Education, with an emphasis on the SUS. Academic medical societies should focus on health promotion and disease prevention, equipping students to understand the health-disease continuum and improve health care, without prioritizing early specialization, thereby preserving the profile of the general practitioner ⁶.

Students also join academic societies to fulfill medicine's social role. Through these societies, they carry out projects aimed at promoting health and social change, applying scientific knowledge for the benefit of the community. This practice of civic engagement is consistent with the ideal medical education ⁷.

On the other hand, academic leagues may encourage early specialization, narrowing students' perspectives and undermining their broad-based education ⁸. This trend can reduce the leagues to study groups focused primarily on scientific publications, to the detriment of meaningful learning and effective social contribution, undermining their role in university outreach and resulting in activities of questionable impact ^{9,10}.

Given this context, this systematic review aims to analyze the contributions of academic leagues, highlighting their educational and social impacts.

METHODS

This is a systematic review conducted in accordance with the Preferred Reporting Items for Systematic Review Protocols (PRISMA) guidelines, focusing on identifying the contributions of academic societies and highlighting their educational and social impacts. The search was conducted on the Virtual Health Library (VHL), SciELO, and Google Scholar platforms from March to May 2025. The search used the following keywords: "Medicine," "Academic League," "Medical education," "University education," and "Curriculum." The search strategy was designed using the Boolean operators AND and OR, forming the following combinations: ("Medicine" OR "Academic League") AND ("Medical education" OR "University education") AND ("Curriculum"). The objective was to select studies published in Portuguese, English, and Spanish, available in full and free of charge, within a five-year timeframe. Theses, dissertations, abstracts from conference proceedings, and articles that did not meet the review criteria were excluded from the search.

The article review process involved searching for, identifying, and analyzing relevant publications and data. The initial search of the databases was conducted by analyzing titles, abstracts, and full-text articles based on pre-established eligibility criteria. The selected articles

were evaluated to extract information relevant to the review's objectives, which focused on analyzing the contributions of Academic Leagues, highlighting their impacts on student development and society.

Two independent reviewers conducted the initial screening of titles and abstracts, following predefined inclusion criteria. Articles published in the last five years in Portuguese and English were considered, including review studies, clinical trials, and exploratory/documentary research. Exclusion criteria included experience reports, case studies, opinion pieces, clinical practice guidelines, dissertations, and texts not available in full.

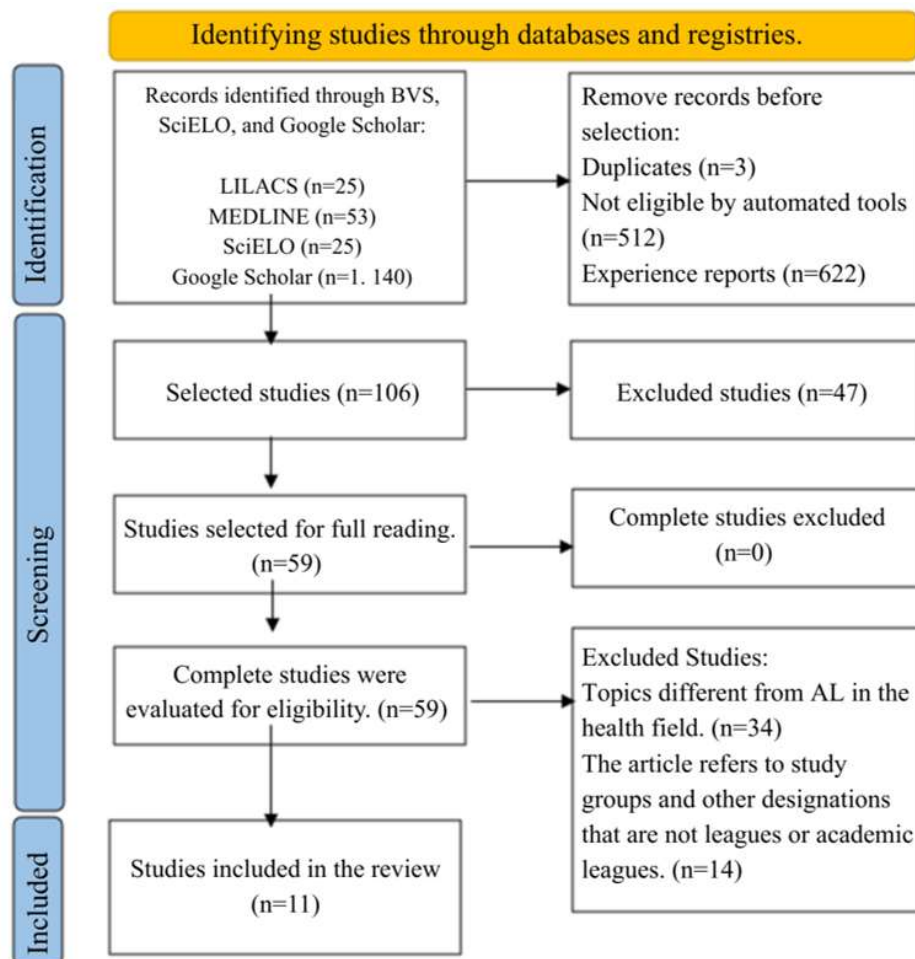
This review has limitations related to the limited number of databases consulted, access only to free-access articles, and a five-year time frame, which may have resulted in the exclusion of relevant studies. The methodological heterogeneity of the included studies also limits more consistent comparisons. Furthermore, the exclusion of gray literature may have reduced the scope of the results, despite efforts by the independent reviewer to minimize selection bias.

RESULTS

In the Virtual Health Library (VHL), 78 records were identified, 72 of which were from the LILACS database and 6 from ColecionaSUS. Of these, 3 articles were selected for analysis, 74 were excluded after reviewing the titles, and 1 was considered a duplicate. In the SciELO database, 6 articles were found, of which only 1 was selected.

On Google Scholar, the initial search yielded 15,080 articles. After applying relevance filters, limiting the time frame to the last 5 years, checking for full-text availability, and combining the search terms in pairs, 922 articles were identified, of which only 7 were included. Following the analysis, 11 articles were selected for the review, as shown in Figure 1

Figure 1 - Article selection flowchart.



Source: Prepared by the authors, 2025.

All of the selected articles were written in Portuguese and conducted in Brazil. To facilitate identification, the articles were organized according to Table 1, which presents relevant information on authors, titles, study types, and thematic considerations.

Table 1 – Articles selected for the systematic review (n = 11).

AUTHORS/ YEAR	TITLE	STUDY TYPE	OBJECTIVE	THEMATIC CONSIDERATIONS
Anjos et al., 2023.⁴	The Role of Academic Health Leagues in Brazil: A Narrative Review.	A narrative review	Describe the historical context of the Academic Leagues' activities in Brazil.	The study shows that academic leagues are responsible for a large part of the curricular changes that have taken place in recent years
Barros, 2024.⁷	The impact of medical academic leagues on the choice of medical specialty.	An observational, cross-sectional, analytical, and quantitative study.	Assess the impact of medical students' participation as liaisons and/or members of the administrative staff	It was observed that student participation in academic leagues helps them choose a medical specialty.
Ferraz et al., 2022.⁵	Medical Academic Leagues: A Discussion of Curricula and Regulations.	A narrative review that is descriptive, critical, and reflective.	Identify alignment needs, from creation until periodic evaluation.	They presented the pros and cons of medical education and some potential approaches to regulation.
Goergen, Hamamoto Filho, 2021.³	Academic leagues and their rapprochement with specialty societies: a movement toward curricular counter-reform?	Essay with critical analysis.	To analyze the relationship between specialty societies and academic associations, and the effects of this relationship on the training of future physicians.	There is a growing trend toward collaboration between medical associations and specialty societies that must be monitored with close attention, careful consideration, and a critical eye, so as not to restrict students' freedom to explore the diverse realities of medical practice and learn about various specialties.
Goergen et al., 2024.¹	Participation, recommendations, research output, and social engagement of participants in academic leagues during their undergraduate medical studies.	An exploratory study was conducted via an online questionnaire with boarding school students.	To assess the characteristics of academic leagues and their participants at a medical school, describing their activities and linking them to various aspects of medical education.	Medical students join research groups early on, are active in several of them, and participate in other extracurricular activities. Participation in leagues is associated with extracurricular activities and the publication of articles.
Gonsalves et al., 2024.¹¹	Healthcare academic leagues: a systematic review and proposed checklist to guide future studies.	Systematic review	To conduct a systematic review of healthcare Academy Leagues in Brazil, analyze their demographic profile and	Further studies on this topic are still needed to shed light on the gap regarding the activities carried out and their academic and social impacts.

			activities in the country, and simultaneously propose a guideline checklist for writing case reports on the subject.	
Melo et al., 2025.⁶	Academic leagues – how to strike this delicate balance in medical education.	Qualitative conceptual analysis.	To conduct a critical analysis of the role of medical student associations in the education of medical students.	There is a need for tools that strengthen the self-assessment of League advisors and promote a balance between required and extracurricular activities, as well as between the three pillars of teaching, research, and community service.
Ferreira et al., 2022.¹²	Academic leagues and medical education: validation of an instrument for assessment and student perception.	A methodological study incorporating content validation steps.	The aim of this study was to validate an instrument for assessing the contribution of LA to the medical education process based on student perceptions.	The questionnaire assessing the contribution of LA to the medical training process is a valid and reliable tool.
Pereira et al., 2022.²	The Impact of Academic Leagues on Student Development: Recognizing Their Importance and Benefits for the Academic Community.	Exploratory field study.	Identify whether the LAs had a positive contribution to the students' academic and personal development, if they recognize this contribution, and if the LAs also serve the benefit of the entire academic community.	Students recognize its value and positive impact on the academic community, enhancing learning and encouraging integration.
Pontes et al., 2021.²	The importance of academic leagues for university education.	Integrative literature review.	To report on the contributions of academic leagues to university education.	It became evident that the activities carried out by the league members enable the exchange of constructive experiences to promote the improvement of technical skills.
Tavares, Andrade, Teixeira, 2020.⁸	Contributions of academic leagues to Brazilian medical education.	Literature narrative review	To describe the state of the art of the contributions of academic leagues to medical education in Brazil.	Academic leagues contribute to encouraging teaching, communication, learning in management, choosing a medical residency, understanding

				the job market, and engaging with the community.
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Source: Prepared by the authors, 2025.

DISCUSSION

Academic Leagues (LAs) are recognized as university extension projects, affiliated with the Pro-Rectorcy of Extension, even when they include teaching and research and have an indefinite duration.¹³ Extension is viewed as their main pillar, as it integrates teaching (deepening theory and practice) and research (filling gaps in theoretical and practical fields). In the field of Health, the Leagues emerged to address specific learning needs not fully met by regular education. The LAs have a long history in Brazil, with the first one established in 1920 at the USP School of Medicine, focused on providing free medical care by students ¹.

Based on a review of the articles, it was observed that LAs are student associations whose purpose is to promote learning through teaching, research, and extension. They are governed by bylaws that define their purpose and the activities they carry out. Members are selected after completing an introductory course taught by professors or professionals in the specific field. Registration may be free, and in cases where a fee is charged, the amount is used to cover the league’s expenses ¹¹.

LAs play a crucial role in student education by fostering the development of critical and professional skills. They are important for cultivating more critical and engaged students, sparking interest in health-related topics, and encouraging further research ¹². This engagement often improves academic performance and helps produce professionals with a broad perspective on the health field ¹⁴.

LAs are also important for developing organizational, management, and communication skills. Through the constant promotion of courses, mini-courses, and training sessions, league members become capable of organizing events of various sizes and teaching about health topics. ¹⁵ Furthermore, by integrating into the curriculum, LAs contribute to student motivation and the promotion of initiatives that benefit society. ¹⁶

Despite their advantages, LAs face challenges such as a lack of focus on research and extension in some areas, especially in the North and Northeast regions of Brazil, and early specialization, which can limit students’ broader perspective on health. Inadequate supervision of practical activities is also a concern, as many supervisors are residents or recent graduates, which can compromise the quality of learning ¹⁷.

According to the Law of Guidelines and Bases of National Education (LDB), the purpose of higher education is to promote research, foster an understanding of contemporary issues, and provide outreach programs that are open to the public. Thus, LAs play a crucial role in bridging the gap between universities and society by providing health services and initiatives that support students’ practical ¹⁵⁹

learning, thereby having a positive impact on the community.¹⁷

Participation in LAs offers significant benefits for academic development, such as the development of soft skills (interpersonal skills) and the fostering of strong teamwork, in addition to providing a deeper understanding of social and regional health needs⁷. The job market values professionals with distinctive resumes, such as those who participate in LAs, as these students have a greater capacity to make decisions and contribute to the health needs of the population⁸.

Participation in LAs is not limited to medical practice; it involves the development of administrative and event-management skills, which are essential for training leaders and for personal and professional growth.⁹ Furthermore, the activities of LAs, such as health fairs and outreach initiatives, are aligned with learning about the social determinants of health, providing students with a critical and ethical perspective on their future role as health professionals¹⁰.

LAs have proven to be an effective tool in the development of undergraduate students, with a positive impact on both academic training and the community. However, there is still a need for further studies exploring the effects of LAs, especially regarding their contribution to the health-disease process and social intervention actions^{1,12}. Thus, new research is needed to deepen our understanding of the impact of LAs and their evolution over time^{11,17}.

CONCLUSION

Academic Leagues (LAs) play a crucial role in the development of university students, fostering interaction between students and professionals, as well as encouraging theoretical and practical learning and helping students tackle new challenges. These activities foster the exchange of experiences and contribute to the improvement of technical, personal, and academic skills, helping to shape a professional identity focused on community service through health promotion and continuing education initiatives.

LAs also play a fundamental role in higher education, complementing the National Curriculum Guidelines (DCNs) for the medical program. According to Article 3 of Resolution No. 3, dated June 20, 2014, medical students must receive a well-rounded, humanistic, critical, and ethical education, preparing them to work at different levels of health care. In this context, the LAs structure their activities around the pillars of teaching, research, and community outreach, promoting the development of these competencies in students.

Although LAs are, or should be, essentially extension agencies, the effective implementation of this pillar has proven challenging. The heavy course load, lack of incentives, and excessive bureaucracy make it difficult to create projects that have a meaningful impact on the community.

Often, these activities end up being confined to the academic environment, far removed from the true concept of extension, with little or no transformative impact on society.

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