

MEDICAL STUDENTS' PERCEPTION OF A TRAUMA, RESUSCITATION AND EMERGENCY MEDICINE INTEREST GROUP

Avaliação da liga de trauma, reanimação e emergência na percepção dos estudantes

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ABSTRACT

Objectives: This study aims to identify participants satisfaction level in interest groups of medical students known as “Ligas Acadêmicas” (Portuguese term for “academic leagues”), in this case, the Trauma, Resuscitation and Emergency Medicine Interest Group at the Federal Fluminense University (UFF); the main factors that motivated students to participate in the group; and the importance attributed to this activity, and to the medical course itself. **Methods:** A survey was applied to a sample of 38 medical students, mainly female (52.63%). The average rate of participation was 78.2% (± 13.4). In a general subjective evaluation, a score from 0 to 100 was applied about satisfaction with the group and the course. **Results:** The main reason for participating in the group was to improve knowledge on trauma and emergency, while interested in research and extension. **Conclusion:** The results therefore reinforce the essential role of the interest group as an extracurricular activity, addressing issues relevant to the education of academics through specific didactic methods.

Keywords: Medical education, Medical students, Teaching.

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INTRODUCTION

Currently, medical student interest groups, known in Brazil as "Ligas Acadêmicas" (Portuguese for "Academic Leagues") are among the most sought after extracurricular activities by Brazilian medical students¹, showing an undeniable numerical increase^{2,3}. In the context of medical training in Brazil, these extracurricular interest groups are formed by students from different graduate programs in healthcare and coordinated by professionals of the teaching institution or hospital. Their main objective is to complement students' medical education, deepening the knowledge in subjects from the course's traditional curriculum⁴. This strategy has been increasing in importance and gaining space within the university environment due to its potential to contribute to medical education⁵.

The current curriculum of the medical course at the *Universidade Federal Fluminense* (UFF) does not have a mandatory rotation in Emergency Medicine and teaching of this specialty is, therefore, restricted to elective courses scattered throughout the medical curriculum, which provide a fragmented training⁶. In addition, the *Hospital Universitário Antônio Pedro*, a teaching hospital linked to UFF, operates in a referral system, so the experience with trauma and emergency situations is limited.

The Trauma, Resuscitation and Emergency Medicine Interest Group (LiTRE, in Portuguese) is a UFF project that integrates graduate students in the healthcare field, mentored by professors and attending professionals, whose mission is to stimulate the study of medical emergencies and trauma in UFF's academic community. Its activities encompass three areas — pre-hospital, emergency and in-hospital — and aim to offer better training to students and quality service to society. Linked to the Department of General and Specialized Surgery at the UFF School of Medicine, LiTRE annually renews its student body through a selection process, after a symposium with speakers from renowned institutions. At that time, its board of directors, made up mainly of participants of the group who stood out during the previous year, is also renewed. The project's initial aim is to contribute to traditional education, providing theo-

retical and practical activities, promoting the contact of participants with medical practice and with patients, carrying out scientific work and providing greater integration with society, through extension projects in the community setting, such as "LiTRE-Saúde" and "LiTRE-Educa".

Despite a large number of student interest groups in Brazil, there are few studies that describe this type of extracurricular activity⁷⁻⁹, and show their participants' satisfaction or their scientific output^{4,7,10}. Therefore, it is necessary to evaluate these initiatives in order to identify the positive and negative aspects of their work, as well as the way they operate and function, always aiming at better performance and service in their next years of operation.

Hence, the objective of this study was to assess the satisfaction of the participants of the group during the year of activities. Objectively, the research aimed to promote a self-assessment by the participating students, to assess the main factors that motivated them to participate in the interest group and to highlight the characteristics of the work by LiTRE.

METHODS

This is a quantitative, survey-type study, with a sample of participants from LiTRE, all medical students from UFF and over 18 years old. The research was carried out at the School of Medicine of UFF.

A questionnaire developed by the authors was applied, composed of two parts, with a total of 20 questions. The first six questions correspond to the self-assessment of the group's participants and their respective participation in the activities, elaborated from a questionnaire obtained from the UFF's institutional evaluation system¹¹. The other fourteen questions seek to understand the purpose of LiTRE's work, encompassing the role of its directors, its characteristics, importance within university education and a general subjective assessment by assigning a grade from 0 to 100, in addition to open space for additional comments. The questionnaire applied was the same for the three areas of the group (pre-hospital, emergency, and in-hospital) and data collection took place in June 2017, at the end of the activities, with the assistance of the directors of LiTRE. Students who abandoned the group's activities or who refused to answer

the questionnaire were excluded.

The data were tabulated in Excel® 2016. Subsequently, for the descriptive statistical analysis and verification of the hypotheses elaborated, Epi Info 7.2.1.0 for Windows software was used. Fisher's exact test and chi-square test were used to analyze associations. In all analyses, a significance level of 5% and a 95% confidence interval were considered.

The project was approved by the Research Ethics Committee of Hospital Universitário Antônio Pedro/School of Medicine, under CAAE 63085516.8.0000.5243 and protocol n° 1.950.150. All participants were informed about the study and consented to participate by signing a term.

RESULTS

The study sample consisted of 38 students (76% response rate), with an average age of 23.4 years (± 2.96), twenty (52.63%) being female. Participants were enrolled from the fifth to the 11th period of medical school (Figure 1). Sixteen (42.11%) participants corresponded to the pre-hospital field, fourteen (36.84%) to the emergency field and eight (21.05%) to the in-hospital field.

Twelve participants (24%), seven males and five females, were excluded from the study, eight refused to participate and four abandoned the group during the year. By segment, four were from the pre-hospital field, six from the emergency field and two from the in-hospital field. By period, four were academics from the fifth period, six from the sixth period and two from the ninth period.

Regarding the participants' self-assessment, 23 (60.53%) members answered positively to all questions, which are reproduced in Table 1 along with the number of respondents of each individual question.

The students were asked at two moments about their interest in acting in the trauma and emergency field: in the period before they began participating in LiTRE and after one year of participation. Nine (23.68%) participants of the group changed their opinion after one year, of which five became interested and four lost interest, resulting in 33 (86.84%) interested medical students after the end of activities.

The performance of the directors was assessed in relation to the mastery of content, extra-class availability, use of acces-

sible language and responsibility for class schedules, and 36 (94.74%) participants answered positively to the questions that addressed this item. Specifically, in relation to the structure of the classes, they were asked about the order of presentation of the contents, the use of teaching methods and resources, the workload, and its importance for training. Regarding these questions, 32 (84.21%) study participants agreed partially or totally. All members of the sample agreed that the group is important to education, totally ($n = 36$) or partially ($n = 2$).

In the question related to the reasons that led them to participate in LiTRE, which allowed multiple responses, the most chosen option was "Improving knowledge about trauma and emergency", followed by "Interest in rotations" and "Interest in practical classes" (Figure 2). The sixth period was considered as

a cut-off point for evaluating the reasons in two moments: in the first and second half of the medical course. Thus, by stratifying the sample into two groups, different results were found: among students below the seventh period ($n = 18$), 94.44% were interested in practical classes, while among those in the seventh period or above ($n = 20$), 65% chose this option ($p = 0.031$). The same difference between the initial and final periods of the medical course occurred in relation to the option "The medical course does not address this topic", an option chosen by 88.89% of the medical students below the seventh period, as opposed to 60% of students in the seventh period or above ($p = 0.047$). Twenty-eight (73.68%) students mentioned more than four reasons among the seven listed. Regardless of the period, the least chosen option was interest in research and extension.

In a general subjective assessment of LiTRE attributed by the students themselves, with a score from 0 to 100, the interest group obtained an average of $91.1 (\pm 7.6)$. The grades ranged from 70 to 100, with 90 being the most frequent (Table 1). Of the 36 who believe that they have obtained an adequate training and answered positively to all questions about the directors, 31 (86.11%) evaluated the group with a score greater than or equal to 90. In terms of satisfaction, thirty-five academics (92.11%) said they were satisfied with LiTRE and this assessment is correlated with the good grade attributed (≥ 90) by 88.57% of them ($p = 0.0041$). The question about the importance of the LiTRE for medical education also correlates with a score greater than or equal to 90, being attributed by 86.11% of those who fully agree with this question ($p = 0.029$).

FIGURE 1 - Absolute distribution of the sample in relation to the period in the medical course.

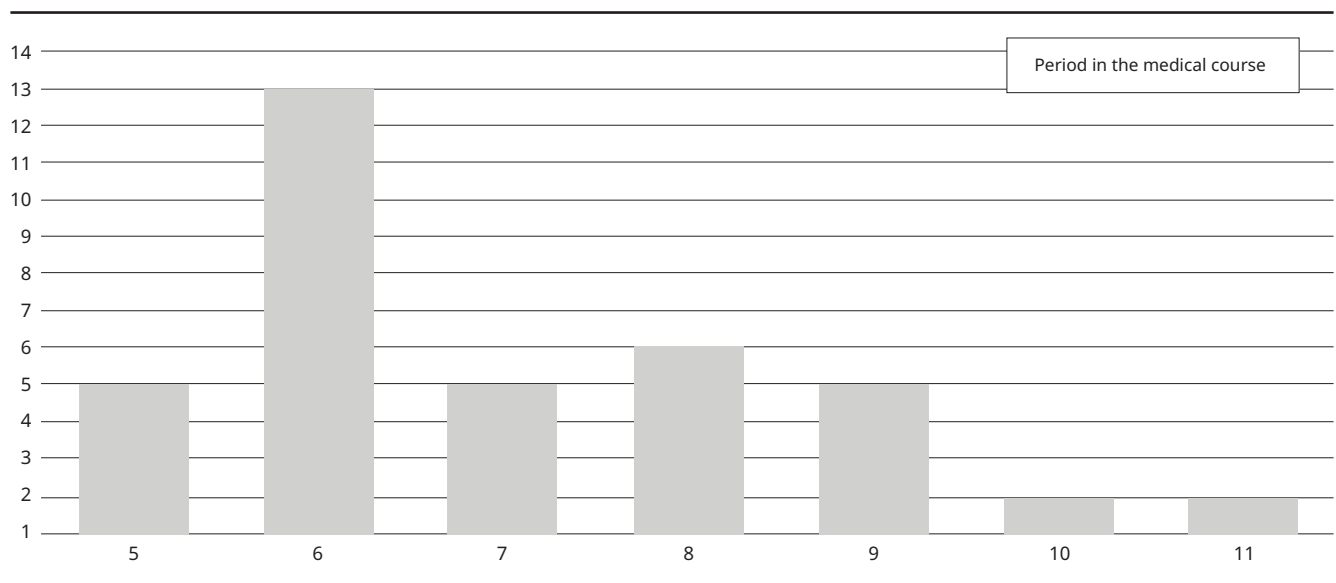
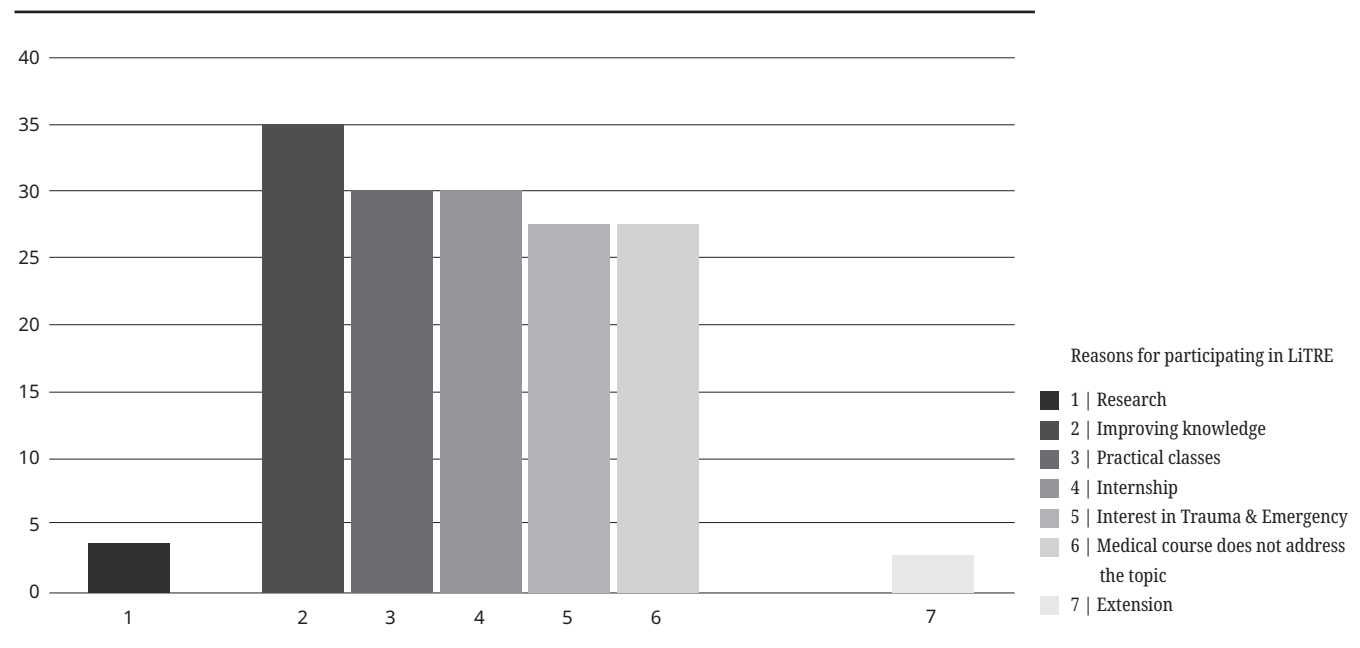


TABLE 1 - Questions and frequency of responses in the self-assessment domain.

QUESTIONS	RESULTS (ABSOLUTE)	PERCENTAGE
I was assiduous and punctual	30	78,95%
I had the necessary knowledge to complete the course	33	86,84%
I had the necessary material resources to carry out the activities	35	92,11%
I performed academic tasks with dedication	38	100%
I identified with the course	38	100%
I got a good academic performance	37	97,37%

FIGURE 2 - Absolute distribution of reasons for participating in LiTRE.

The average number of absences during the group's activities was $3.5 (\pm 1.6)$, with an average frequency of $78.20\% (\pm 13.4)$. When stratifying the grade attributed to LiTRE by frequency in class, of the 29 (76.32%) participants of the group with a attendance rate greater than or equal to 75%, 26 (89.66%) reported a score greater than or equal to 90 ($p = 0.04$).

Thirteen group participants made open comments at the end of the questionnaire, of which six suggested more practical classes.

DISCUSSION

The main outcome found by this study was the predominance of a score greater than or equal to 90 attributed by LiTRE participants, a result of the good performance of the group directors, of the student's learning and achievements, of the perceived importance for medical education and, consequently, of their satisfaction with the group. It is important to note that all medical students agreed that the project is important for their training, portraying the awareness of the need to expand knowledge on the topic, as well as the work done by the group.

Participating students stated that they carry out the activities with dedication,

possess the necessary knowledge on the subject, are assiduous in the activities and identify with the project. All of these variables work as counterparts provided by students in the face of the professional training task developed by LiTRE. This way, the work becomes bidirectional.

In a similar study⁴, questionnaires were applied to assess student satisfaction, positive and negative points, and learning, one year after the activities of the Bahia Plastic Surgery Interest Group began. An interesting result obtained in this study was the growing number of students interested in working in the field, going from 28.60%, before activities, to 78.60%, after one year. Likewise, there was an increase in five students who were previously uninterested and changed their opinion after participating in the activities of the group. Under these circumstances, interest groups act as guides and advisers on future specialization countless times, so that contact with the profession's daily practice and routine can reaffirm the desire or, equally, cause a change in the students' opinion, as happened with the four who lost interest in working in this segment. For these, LiTRE, in addition to the content provided, was able to determine

the direction of the choice of residency, bringing them closer to the reality of what they do or do not want to accomplish when they graduate.

Despite the National Curricular Guidelines for Medical Courses, the large time load allotted during medical training for the teaching of trauma and emergency is often not effectively used, hampering the training of future professionals¹². In the meantime, it is not uncommon for student interest groups to emerge in Brazil, out of spontaneous demand from students, as a means of complementing their training. This circumstance provides a differential between students who seek extracurricular activities in relation to those who do not engage in them¹³. This statement is in line with the results obtained in the present study, because, among the most cited reasons for participating in LiTRE, is the fact that the medical course does not address the topic in its traditional curriculum, in addition to the possibility of rotations and practical classes. Frequently, the trauma and emergency field is not addressed in a broad and effective way¹³, generating a large gap in medical training, mainly because the emergency is one of the main fields of activity of newly

graduated doctors in Brazil. However, it is noteworthy that it is not up to the student interest group to fill such gaps, but rather to deepen the topics of interest through the use of different didactic methods. Deficits in medical education and training must be promptly diagnosed by educators and coordinators in order to be met through curricular changes.

It is interesting to note that students in the second half of the course showed less interest in practical classes and less complaints about the medical course not addressing the topic. A probable factor for this is the so-called "parallel curriculum", defined as the set of extracurricular activities developed by the students during their medical training¹⁴. The number of students who adhere to this "parallel" medical training increases progressively starting from the fifth period, with a peak in the tenth period, in which 94.7% of students have some type of extracurricular activity¹⁵. Such practice brings students from more advanced periods closer to the trauma and emergency field, and may be an explanation for the change in motivation to participate in the group between the initial and final periods.

Although LiTRE has active research and extension projects, such as those aimed at teaching routine emergencies to public school students (LiTRE-Educa) and the general population (LiTRE Saúde), our study revealed a small number of medical students reporting interest in these activities. This is in line with the national casuistry in Brazil, since student interest groups, lacking the necessary guidance, tend to carry out activities of an essentially curricular nature, reducing the time allotted and adequate planning for extension projects¹⁶. The results of this study indicate the need to stimulate such requirements, in order to reach the main objectives of student interest groups (teaching, research and extension), as presented by other groups, such as the Head and Neck Surgery Interest Group of the Universidade Federal do Ceará, which has seen great growth in the scope of research, teaching and extension, with an increase in the number of published manuscripts, and oral and poster presentations, in the period from 2007 to 2013¹⁷.

Other activity that needs improvement, as requested by the students, is practical training. Despite being extre-

mely necessary for the technical training of future professionals, there are still major limitations, especially the lack of resources, since most of them require simulators with high costs.

Thus, the results show the satisfaction of the medical students and the good performance of LiTRE in relation to its commitments, complementing the training of future professionals in the field. Improving knowledge and interest in practical classes and rotations were the main reasons that led students to participate in the group. Currently, LiTRE is well evaluated, which is a great motivation to continue the work and effort to complement the traditional curriculum of medical school.

This study has some limitations, among them, the small sample size, due to the restricted number of participants of the group and the rate of non-response by some of its members. It would be interesting to carry out subsequent studies, as it would allow the evaluation of interventions carried out from the flaws identified in previous questionnaires, seeking to establish better strategies for future activities.

In addition, a national survey on trauma and emergency interest groups would be valuable, which could, for example, define the more specific role of these groups, with their regional peculiarities and performance in relation to the other groups in Brazil, enabling an exchange of information and experiences.

CONCLUSION

The data reinforce the hypothesis that LiTRE is an extracurricular activity addressing relevant topics, which are essential for the medical training, with effective didactic methods, adequate workload and efficient learning environment. In general, the group was well regarded in relation to its directors and the projects' performance characteristics. In addition, the self-assessment with reasons for participating in the group, intention to act in the trauma field, and the grade assigned, reported by the vast majority of students, reflected the sample's satisfaction.

The positive assessment of LiTRE as an essential extracurricular activity reinforces the need to maintain and encourage additional strategies to improve the training in Emergency Medicine and Trauma in the traditional medical curriculum.

DISCLOSURES

There is no conflict of interests to declare.

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