

Students' perspectives on the parallel curriculum in medical schools

Currículo paralelo na graduação médica na perspectiva dos estudantes

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ABSTRACT

Introduction: the term “curriculum” can be interpreted as a “grid” of courses and the contact hours in an education institution. There is a formal curriculum, consisting of taught content and practical activities officially organized by the faculty, and a parallel curriculum (PC) covering activities that although not determined by the institution are relevant to a medical education. For students, structuring the CP comes with numerous motivations but is not without obstacles. **Objective:** to define the profile of activities developed, motivation, difficulties, and satisfaction among students performing extracurricular activities (EA). **Methods:** 10-question structured interviews with 280 medical students. **Results:** most respondents (96.4%, n=270) had already taken part in at least one EA, making it the most popular optional course in the formal curriculum. 55.4% (n=155) wished to include improvement courses and 45% (n=126) professional training. The main motivation was the desire to enhance the curriculum, cited by 73.9% (n=207). Main obstacles were the limited number of takings (51.8% n=145), and conflict of schedules (50%, n=140). **Conclusions:** This sample showed a high number of students engaged in EA, especially among those that lead to practice improvement, CV enhancement and score better in residency requirements. Being closer to graduation represented a risk factor for completing these EA. Most EAs are supervised by teaching physicians and were considered highly satisfactory. With this in view, we suggested that some of the extracurricular activities be included in the formal curriculum, prioritizing the improvement of clinical practice. This addition has the potential of increasing the level of training and result in more skilled and confident medical professionals.

Key words: Curriculum; Medical Education; Medical Students; Education, Medical, Undergraduate.

RESUMO

Introdução: o termo “currículo” pode ser interpretado como “grade” de disciplinas e cargas horárias da instituição de ensino. Existe o currículo formal, constituído por conteúdo didático e atividades práticas, estruturado oficialmente pelas faculdades, e o currículo paralelo (CP), contemplando atividades não determinadas pela instituição, mas relevante para formação médica. A construção de um CP pelo estudante possui inúmeras motivações e não está isenta de obstáculos. **Objetivo:** traçar o perfil das atividades desenvolvidas, motivações, dificuldades e satisfação dos acadêmicos imbuídos em desempenhar atividades extracurriculares (AE). **Métodos:** utilizou-se entrevista estruturada com 10 perguntas, aplicada a 280 acadêmicos do curso de Medicina. **Resultados:** a maioria dos entrevistados já participou de alguma AE, 96,4% (n=270), sendo a disciplina optativa a mais realizada; no currículo formal, 55,4% (n=155) desejam incluir cursos de aperfeiçoamento; 45% (n=126), treinamento profissional; a principal motivação foi desejo

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de aprimorar currículo – 73,9% (n=207). Como maiores obstáculos: a escassez de vagas, 51,8% (n=145), e a disponibilidade de horários, 50% (n=140). Conclusões: a amostra apresentou elevada participação em AE, destacadas as que promovem o aperfeiçoamento da prática, aprimoramento do currículo e que permitem melhor pontuação nos concursos de residência médica, sendo o período mais avançado um fator de risco para a execução. São majoritariamente supervisionadas por médico docente e contemplam alto índice de satisfação. Diante desse panorama, sugere-se a incorporação de algumas das atividades extracurriculares no currículo formal, priorizando o aperfeiçoamento da prática clínica, que poderá incrementar o nível da formação resultando em profissionais mais capacitados e seguros em exercer a Medicina.

Palavras-chave: Currículo; Educação Médica; Estudantes de Medicina; Educação de Graduação em Medicina.

INTRODUCTION

The word “curriculum” comes from the Latin and can be understood as a path, career or act of running through. It has a range of possible meanings, from a written text to a grid of subjects and course hours, and even “everything” that takes place at school or university.¹

The formal curriculum is made up of documents with the educational content and practical activities officially structured by schools. An educational curriculum provides experiences that aim at the acquisition of existing knowledge, skills, and behaviors necessary for the medical practice.^{1,2}

In addition to this context, there is another called “parallel curriculum” (PC). It is structured from extracurricular activities (EA) performed by students, for example, internships, shifts, and refresher courses.^{2,3} The PC enriches the medical education and personal development of students.³ It should be built under the guidance of teachers with a focus on improving knowledge and medical practice.

EAs are important for comprehensive medical education since they do not restrict students to activities predetermined by the institution, but allow them to discover how stimulating it is to search for new experiences and knowledge that will make them stand out in their academic training and lead them to educational success, as Philippe Perrenoud argues.⁴ In the future, they can increase their chances of being selected for a medical residency or specialization.⁵ Thus, building a PC is a way to enhance the possibilities of more successful medical training in which students take part in activities outside the medical school.

Several factors motivate medical students to build their PC: well-being, the pleasure of doing certain tasks; improving the formal curriculum; gaps in certain college activities; financial gain; integration with colleagues; improving their practice and extending their clinical experience; answering work-related questions; meeting the demands of family and society, among others.^{6,7} Students give up their meal times, rest, leisure and physical exercise and, most importantly, superimpose curricular engagements, which can contribute to irregular academic practice.⁸ Furthermore, these activities might be beyond academic control¹ and might not be adequately guided, calling for more interaction between educational and medical service institutions.⁹

Because of our ongoing and extensive curricular reform in recent years, we aimed at mapping out the current parallel curriculum training of medical students at the Universidade Federal de Juiz de Fora (UFJF), including the activities, the rationales, degree of satisfaction and, where appropriate, possible difficulties during the undergraduate years of medical school. The data can contribute to a better structuring of the new academic curriculum and serve as research for other institutions also engaged in this large-scale process of improving medical education.

MATERIALS AND METHODS

This is a cross-sectional, observational study, in which factor and outcome are measured concomitantly to estimate the prevalence of the outcome variable (in this case, knowledge of the theme “parallel curriculum in medical education from the perspective of students”). PC activities were considered to be all those that are not part of the formal curriculum set by the university, therefore comprising EAs, and which are performed by students. Due to the variety of activities that can compose a PC, only those that are part of the reality of the sample were selected, the main ones being: internships linked or not to Academic Leagues; informal medical monitoring; tutoring; optional subjects; extension projects; government programs; professional training; study and clinical reasoning groups; research projects; extension projects; training courses; undergraduate independent study; and foreign language courses.

This is an original exploratory, descriptive, and quantitative field study.

The instrument for data collection was a questionnaire consisting of 10 open and multiple-choice questions that enclosed two copies of the Informed Consent Form (ICF). Before answering the questionnaire, students were guaranteed their anonymity as the questionnaire was individual and unidentified.

The sample was composed of UFJF medical students approached at the university itself, comprising 280 students enrolled in the 3rd, 5th, 7th and 9th semesters who were invited to answer the questionnaire on a voluntary basis with no costs or losses incurring. The research was carried out between May and August, 2011. These sample spectra strictly meet the criteria and the statistical needs. Sampling error was considered 4.5% (plus or minus).¹⁰

The participants were approached in a standardized manner by three trained researchers, gave prior agreement, answered the questionnaire individually and voluntarily and signed the informed consent, including the students in the pilot group. The training for data collection took place at the pilot study with 16 individuals in order to test the instrument, detect problems in understanding the questions, make changes to the questionnaire and help organize the fieldwork.

The inclusion criteria were: being a medical student, aged 18+ years, enrolled in one of following semesters: 3rd, 5th, 7th and 9th – and to immediately answer the questionnaire. Individuals who failed to answer the questionnaire immediately or refused to participate were excluded from the study. Sample loss represented failure to answer the questionnaire fully, failure to turn in the questionnaire or failure to sign the ICF.

We used the EPI INFO 3.5.1[®] software to build the database and for the statistical analysis. The analysis of the results obtained complied with the following standards: confidence index of 95% and p-value below 0.05.

As this is a cross-sectional study, the measure of occurrence obtained is prevalence. Therefore, as a measure of association we used the prevalence odds ratio (POR). We used this as a measure of statistical significance, in addition to the chi-square test without correction.

Participation in the research implied minimal risk to participants, that is, there was no interference from the researchers in any aspect of their physical, psychological and social well-being, or their intimacy, in compliance with the parameters contained in Resolution 196/96 of the National Council of Health/Ministry of Health, which lays down the rules for research involving human beings. The study was approved by the Ethics and Research Committee under the pro-

ocol number 2339.079.2011, opinion 089/2011, FR 415059 and CAAE 0078.0.180.000-11.

RESULTS

The sample was made up of 280 participants, 42.9% (n= 120) male, 48.9% (n= 137) female and 8.2% (n= 23) undeclared, and the average age was 22.13.

As regards extracurricular activities, it became apparent that the majority of respondents have taken part in some kind of extra-curricular activity, 96.4% (n= 270). Optional subjects, 76.4% (n= 214), foreign language courses, 70.7% (n= 198), and tutoring, 56.8% (n= 159), were the most common activities. On the other hand, undergraduate independent study, 8.6% (n= 24), professional training, 12.5% (n= 35), and study groups, 13.2% (n= 37) showed the lowest rates (Figure 1).

When asked about the activities that they thought ought to be included in the formal curriculum, most mentioned refresher courses for 55.4% (n= 155), and professional training and extension projects, both corresponding to 45% (n= 126). We also noted that optional subjects, government programs and foreign language courses were less mentioned, their figures being 16.8% (n= 47), 17.1% (n= 48) and 23.2% (n= 65) respectively (Figure 1).

The main reason given to the demand for extracurricular activities was the desire to enhance the curriculum, 73.9% (n= 207), followed by interest in mastering practice, 67.9% (n= 197); scoring points in medical residency, 54.6% (n= 153); and gaining new knowledge, 49.3% (n= 138). The least frequent reasons were interest in building teamwork, 6.8% (n= 19), and those interviewed motivated by the fact that other students were engaged in these activities, 1.4% (n= 4) (Figure 2).

Considering the reasons for searching for extracurricular activities, it was possible to note that the majority of respondents, 43.9% (n= 123) reported that their initial expectations were met. However, 41.8% (n= 117) thought they were partly met, while 2.1% (n= 6) stated that their expectations were not met at all.

The scarce number of places, the schedules and insufficient advertisement were pointed as the major causes for the difficulties experienced by students who participated in some kind of extra-curricular activity, with percentages as follows: 51.8% (n= 145), 50% (n= 140) and 24.6% (n= 69), respectively (Figure 3).

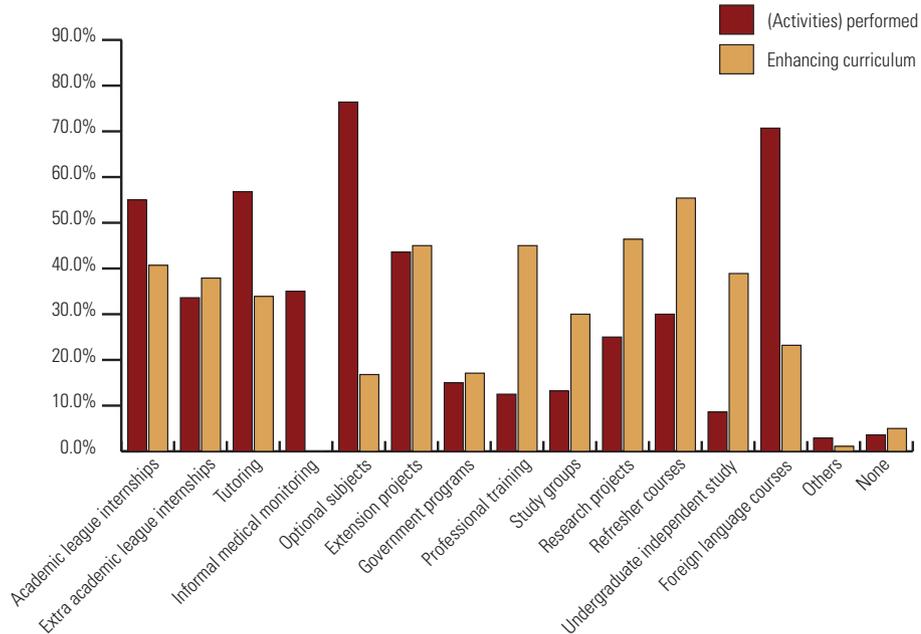


Figure 1 - Extracurricular activities performed and aimed for inclusion into the formal curriculum.

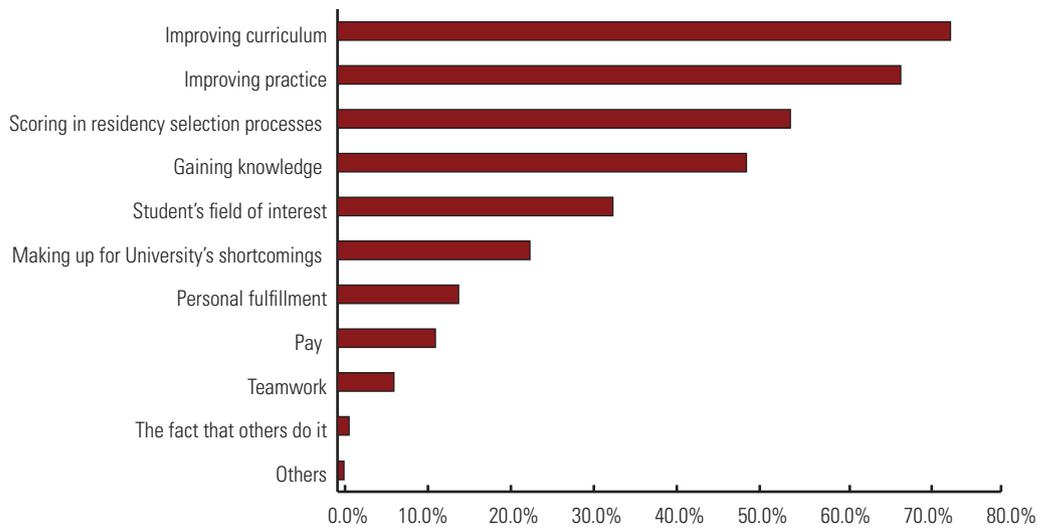


Figure 2 - Reasons that prompted students to search for extracurricular activities.

Extracurricular activities, according to most respondents, contribute significantly – 61.6% (n= 263) – or reasonably – 26.6% (n= 113). Finally, some respondents reported that the activities contributed little, 4.6% (n= 19), not at all 1.1% (n= 4) or crucially 6.0% (n= 26), to their medical education.

Of those who evaluated their level of satisfaction with the activities (n= 223), it became evident that internships, 46.2% (n= 103), tutoring, 12.5% (n= 28) and

informal medical monitoring, 6.7% (n= 15) were the activities that they were most satisfied with. Among the respondents who explained their opinions (n= 204), we were able to notice a predominance of ideas related to improvement of medical practice and contact with the professional routine, 50% (n= 102), acquisition of new knowledge, 25.4% (n= 51), and expansion of knowledge of a specialty of their interest, 10.7% (n= 22), to justify their choices.

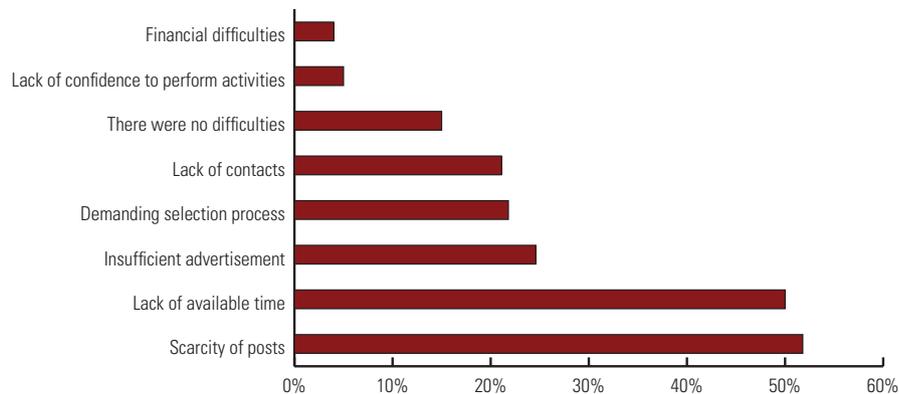


Figure 3 - Difficulties to engage in extracurricular activities.

When we asked respondents about the losses caused by the activities, we found that studying for exams, 51.4% (n= 144), leisure and rest, 50.4% (n= 141), and curricular engagements, 47.1% (n= 132), were the aspects considered to be the most affected (Figure 4).

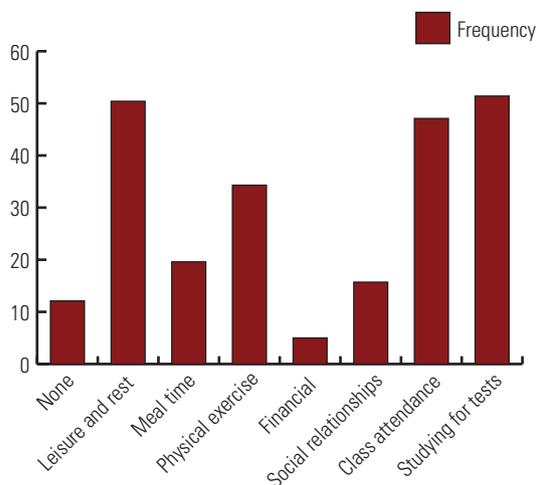


Figure 4 - Losses caused by extracurricular activities.

Among those who quantified the loss they incurred (n= 257), we noticed that 43.9% (n= 123) defined it as reasonable, while 23.9% (n= 67) and 13.2% (n= 37) considered it as significant or absent, respectively.

When asked about supervision in the extracurricular internships, most respondents, 63.5% (n= 169), answered they were supervised by medical university professors. Of all the respondents, 15% (n= 40) were supervised by physicians who are not university professors; and 9.8% (n= 26) were guided by professors who are not physicians. There are still those who are supervised by resident physicians 5.6% (n= 15), by people who are not professors or physicians 3% (n= 8), and 3% (n= 8) of the students are not supervised at all.

According to 19.8% (n= 50) of students, the fifth semester was the one during which the students in the sample were, or are, most engaged in extracurricular activities, followed by the third and seventh semesters, according to 18.2% (n= 46) and 14.6% (n= 37) of the students, respectively. The first term semester had fewer engagements in activities parallel to medical school. 0.8% (n= 2) followed by the fourth and sixth semesters, both with 6% (n= 15).

Concerning the number of hours the students devoted to extracurricular activities, we noted that the vast majority spent four to eight hours or eight to 12 hours, respectively, 37.3 % (n= 99) and 24.1% (n= 64) of respondents. We also found that a smaller part of the respondents was involved with and pursuing these activities for more than 12 hours, 23.4% (n= 62), or less than four hours, 15.1% (n= 40).

By analyzing the relation between the exposure variable, i.e. the semester the student is in, and the outcome variables, i.e. extracurricular activities: informal medical follow-up, refresher courses, language courses, optional subjects, internships linked or not to Academic Leagues, tutoring and extension or research projects, it can be assumed that there is statistical significance to assert that later semesters (from the third year on) are a risk factor for the pursuit of most extracurricular activities (Table 1). We should highlight that no statistical significance was found for the other EAs;

About the reasons for taking part in some sort of extracurricular activity, some outcome variables analyzed are associated with the exposure variable, which is the semester the student was in, with statistical significance. This shows that being in a later semester is a risk factor for such reasons. The search to acquire new knowledge is an exception as it constitutes a protection factor for the same factor (Table 2).

Table 1 - Exposure variable “what semester the student is in associated with extracurricular activities” – outcome variables

Outcome variables (extracurricular activities students engage in)	Exposure variable – semester the student is in						p-value	OR
	Inferior		Superior		Total			
	n.	%	n.	%	n.			
Informal medical monitoring	35	64.3	63	35.7	98	<0.001	1.61 - 4.46	
Refresher courses	5	5.9	80	94.1	85	<0.001	15.2 - 25.98	
Language courses	88	44.4	110	55.6	198	<0.001	1.53 - 4.63	
Optional subjects	98	45.8	116	54.2	214	<0.001	1.50 - 4.91	
Internships linked to Academic Leagues	25	16.2	129	83.8	154	<0.001	1.82 - 3.78	
Internships not linked to Academic Leagues	14	14.9	80	85.1	94	<0.001	6.95 - 25.37	
Tutoring	54	34	105	66	159	<0.001	3.32 - 9.53	
Extension projects	28	23	94	77	122	<0.001	2.35 - 5.75	
Research projects	19	27.1	51	72.9	70	<0.001	2.17 - 7.15	

Caption: inferior = (≤ 3rd year). superior = (> 3rd year) n= absolute frequency. %= percentage. OR: odds ratio.

Table 2 - Exposure variable “what term the student is in” associated with the reasons for engaging in extracurricular activities – outcome variables

Outcome variables (reasons for engaging in extracurricular activities)	Exposure variable – semester the student is in						p-value	OR
	Inferior		Superior		Total			
	n.	%	n.	%	n.			
Desire to improve practice	81	42.6	109	57.4	190	<0.001	1.83 - 5.35	
Interest in field of study	40	43.0	53	57.0	93	<0.05	1.05 - 2.74	
Enhancing the curriculum	98	47.3	109	52.7	207	<0.05	1.09 - 3.30	
Scoring for residency	67	43.8	86	56.2	153	<0.05	1.22 - 3.18	
Acquiring new knowledge	82	59.4	56	40.6	138	<0.001	0.32 - 0.85	

Caption: inferior = (≤ 3rd year). superior = (> 3rd year) n= absolute frequency. %= percentage. Or: odds ratio.

DISCUSSION

The concept of PC has no single definition.¹ We can notice that EAs are those activities considered to be related to the improvement of medical practice, such as extracurricular internships, extension projects, professional training and monitoring from doctors, among others, as well as those involving leisure, physical exercise, and cultural expression. Therefore, there are differences regarding the type, as well characteristics, according to the institution analyzed.

Enrollment in EAs can be done directly through the institution's departments, through opportunities developed by private establishments, such as hospitals or specialized clinics, among others. Academic Leagues, another relevant means of access to EAs, are defined as student organizations for further learning of certain topics. By joining these groups, students have theory lessons, organize courses and symposia,

develop research and extension projects and, above all, perform activities in medical services or provide services for the community.¹¹

According to the National Commission for Medical Residency (CNRM in Portuguese),¹² the admission process for this type of post-graduate training consists of two steps. The first is mandatory and includes a written test; the second is optional and the institution chooses the best way to evaluate these new medical graduates: it could be a practical exam or CV assessment.

Keeping in mind that practical exams are currently both costly and difficult to perform, CV assessment has become, in general, the most commonly used method by institutions.¹² Moreover, CV assessment acknowledges graduates' preparation throughout the entire medical course because it traces the profile of all undergraduate activities, showing whether or not applicants dedicated themselves continuously through the six years.¹² We should remember that,

in addition to assessment of engagement in extracurricular activities, CV assessment considers applicants' curricular achievements from the grades they had in the normal curriculum.¹²

We can see that 96.4 % (n= 270) of the respondents in sample were, or had previously been, engaged in some kind of extracurricular activity. A similar survey at the Universidade Federal de Minas Gerais in 2004 revealed an index of 82.5%; Universidade Federal do Rio de Janeiro showed 76.7%; and Universidade Federal de Uberlandia revealed 100.0%.¹ Other scientific work carried out at Universidade Federal de Alagoas and the Universidade de São Paulo School of Medicine in Ribeirão Preto showed rates of 98.41%² and 92%, respectively⁴.

Thus, we conclude that our sample is consistent with other medical schools, which shows that medical students are concerned with improving their curriculum and possibly sheds light on the need for changes in the activities offered through the formal curriculum. Another possible explanation may be the students' concern with building a successful CV for their medical residency entrance examinations since the number of post offers is lower than the number of doctors aspiring to medical residency. This situation can be illustrated by 2008 data, when 11,545 doctors graduated from medical schools while there were only 7,135 posts for direct access to the residency.¹²

With regard to the kind of activities pursued by students, we find that three kinds prevailed: optional subjects, 76.4% (n= 214), foreign language courses, 70.7% (n= 198), and tutoring, 56.8% (n= 159). In our setting, these activities offer the highest number of vacancies and, therefore, provide more access for students.

Students' participation in optional subjects can reflect their interest in furthering their knowledge about a specific field of Medicine or even to acquire new knowledge, such as: Psychology, Nutrition, Biology, Pharmacy, and the Scientific Method. Another plausible explanation is the need to comply with the university's requirements regarding obtaining extra credits for undergraduates.¹³

The high engagement of medical students in foreign language courses can show their intention to become up-to-date professionals with a more qualified curriculum since most up-to-date and advanced publications in the medical field are in other languages, especially English, and some of the books they use take about three years to be translated. Moreover, knowledge of a second language can represent up to 20% of the total score in the CV assessment process.¹²

Tutoring is a space for learning curriculum content and a space where the tutor solves questions and exchanges experiences freely with a group of students. This activity can create conditions for deeper study of theory and development of skills related to the teaching career.¹⁴ It is offered by departments of the university and can provide remuneration through scholarships. Another aspect that leads to choosing this activity is perhaps the fact that by doing it students can score points in CV assessment processes of application for residency.

In addition to the activities described previously, more than half of the medical students participate in activities that allow for more contact with the day-to-day of the profession, whether through internships linked (55%, n= 154) or not linked (33.6%, n= 94) to Academic Leagues, informal medical monitoring (35 %, n= 98) or even professional training programs (12.5%, n= 35). This interest probably derives from the desire to apply the theoretical knowledge learned, the desire to achieve personal satisfaction through practice or to gain confidence about their medical education. Another possibility is the attempt to fit into the current job market, which values specialties, sub-specialties and high technology exams.¹¹

Some respondents expressed the wish that some extracurricular activities be incorporated into the formal curriculum. A modification in the official Medicine curriculum was indirectly suggested by 95% (n= 266). Inclusion of the activities called internships was recommended by more than half of the respondents: 57.5% (n= 161). This was followed by further education, with 55.4% (n= 155), on topics such as electrocardiograms and basic life support, for example, in addition to professional training, 45% (n= 126), extension projects, 45% (n= 126), research projects, 46.4% (n= 130), and undergraduate independent study, 38.9% (n= 109), which also appeared as options for inclusion.

Refresher training courses are considered teaching modalities, offered privately with no links with the university by research centers in hospitals, health-related institutions or individually by professors. They address and expand knowledge of themes relevant to professional practice such as ECG interpretation, practice of basic life support, principles of intensive care medicine, surgery, among others, updating students on various issues pertaining to medical specialties. The students' opinion about including courses such as refresher training and professional training can reflect their need to strengthen their knowledge of rou-

tine practice¹¹ and their interest in being up-to-date.¹² Moreover, it raises the hypothesis that maybe the current formal curriculum may not currently include some topics of interest to students to their satisfaction.

The emphasis and the importance of activities related to information and science education, such as research projects, undergraduate independent study programs and an active search for knowledge, are some of the recent major additions to medical education in our School. Their widely discussed role in medical education concerns their contribution to constructing, upgrading and interpreting medical knowledge, among others.¹⁵ We concluded that in the analyzed sample the desire to include these activities in the curriculum is greater than the current participation of students in this kind of EA. This aspect, contradictory at first, can be explained by the students' growing interest and the current available opportunities and, occasionally, by the need to increase financial support for projects. We can see a great mobilization taking place at the university to promote opportunities in this area, which students should take, such as undergraduate independent study through programs such as PIBIC and BIC.¹⁶

According to the National Extension Plan, university extension is an educational, cultural and scientific process that establishes an exchange of knowledge between society and the university, which allows knowledge to be extended democratically. The students' option to include extension projects in the formal curriculum can reflect their desire to better know the social reality of the country, to integrate into the community in which they will practice and to gain more space to work on their medical skills.¹⁷ Furthermore, they aim at building a competitive CV, bearing in mind the points to be earned for extension projects in medical residency application processes.

The reasons given by students for doing an EA evoked some aspects that require that we first understand what is meant by motivation. This term can be understood as a set of biological mechanisms that allow the triggering of an action by modulating its orientation, intensity and persistence.¹⁸ It follows that the more motivated one is, the more pleasure one will draw from performing the activity.

In addition, we can understand motivation to be the main mechanism in the teaching-learning process, one in which the students' attitudes may be positive or negative about facts. Students who adopt a negative stance about a task display more lack of interest

in doing it. Those who take on a positive stance use it as an objective to attain their desire.¹⁸ Hence, when we try to study motivation, we search for principles that help understand why people start doing certain activities. In order to find this answer, we must consider individual preferences since different people see the same object and desire it in different ways. People are different in their reasons; there are, for example, those who want to show their commitment and others who yearn for power.¹⁸ When they strive to perform an extra-curricular activity, students bring with them motivations that result in their choices.

The main reasons students get involved in EAs were investigated by several researchers. Carlos Tavares, for example, found that the main motivation for students at Universidade Federal de Alagoas to perform extra-curricular activities was the search for practical experience (36.27%), followed by acquisition of new knowledge (30.39%) and curriculum enhancement (9.80%).² At Universidade Federal de Minas Gerais,¹ acquisition of clinical practice (90.7%), curriculum enhancement (61.6 %) and remuneration (34.9 %) are most motivating. Such aspects are not specific to these universities since the main reasons reported in our study were enhancing the curriculum, 73.9% (n= 207), improving practice, 67.9% (n= 190), and scoring points for medical residency entrance in 54.6% (n= 153).

In our sample, as well as in the studies presented, students look for extracurricular activities to improve their self-esteem and achieve personal fulfillment represented by clinical practice activities, acquisition of new knowledge and curriculum enhancement, which mean participation in decisions, respectability, recognition, responsibility, autonomy, and the ability to solve problems.

We should mention that the option "developing teamwork" was chosen by only 6.8% (n= 19). Teamwork has been encouraged and several authors have highlighted advantages of teamwork over individual work in health-related fields.^{19,20} The following contrast, for example, is noticeable: health professionals in general have specific training in the field in which they operate and the patient needs treatment that goes beyond drugs.²⁰

Another aspect that must be analyzed is the students' satisfaction with the activities they have performed. Studies show that around 80 to 90% of students do some kind of extracurricular activity, which most of the time gives them a high degree of satisfaction.^{6,21,22} The research carried out by Taquette, for example, reports that the majority of medical students

who took part in internships were satisfied with this curricular activity, regarding it as excellent (25.7%) or good (38.9%).²¹ In our study, 85.7% of the respondents considered that their initial motivations for looking for extracurricular activities were somehow met.

Studies suggest that students are more satisfied with activities carried out away from the university, even when these activities are informal, not controlled or not authorized by the university.²¹ Based on this, we should consider it relevant to ascertain whether the demand for extracurricular activities stems from dissatisfaction with the formal curriculum and its developments.

Studies with this focus show that 88.9% and 59.8% of respondents have pointed out a "lack of integration between theory in practice in teaching" in the formal curriculum. Corroborating these data, it was found that the reason for looking for extracurricular activity was related to the need to make up for what the university lacked in 23.2% (n= 65) of the sample.

The concept of "making up for lacks" has a range of interpretations. However, if we focus on the reason "improving clinical practice", voiced by 67.9% of the sample as the basis for searching for extracurricular activities, it points to the ongoing curricular reform at the UFJF School of Medicine. It is known that one of the objectives of the National Program for Professional Health Education Reorientation (Pró-Saúde) is to extend the duration of practical training.²³ For this reason, the UFJF School of Medicine is undertaking curricular changes in order to meet the current need of medical training set by the federal government and to extend supervised internships to 24 months, thereby furthering medical practice, as requested by students.

In addition to the satisfaction involved in performing extracurricular activities, it is necessary to report that participation in extracurricular activities is not simple or free of obstacles. Students must face a reality of insufficient posts, increasingly demanding hiring processes and difficulty to access information about these processes. Among the respondents, 51.8% (n= 145) mentioned the scarcity of posts as one of the main difficulties they had in trying to take part in extracurricular activities, 24.6% (n= 69) highlighted insufficient advertisement as an impediment and 21.8% (n= 61) consider the high demands of the hiring selection processes as barriers to participating in EAs.

The selective process itself makes it hard for students to participate in extracurricular activities because, in most cases, there are selection tests. The constant competition in these processes is due mainly to

the large number of students, their competitive profile, and the search for social prestige.²⁴ Competitiveness can cause communication to be restricted among students and the selective processes to be less known by them. This may also be related to another obstacle in building a parallel curriculum: lack of interpersonal contact, mentioned by 21.1% (n= 59) of respondents.

A difficulty addressed by few students, 5% (n= 15), was insecurity about performing activities. EAs are, for the most part, guided and coordinated by physicians in charge of them, which relieves the students from responsibility and gives them more confidence.

It was found that 50% (n= 140) of the respondents felt that the lack of available time hinders participation in EAs. This may be due to the extensive medical curriculum or because students want to take part, or have already taken part in other parallel activities, given that many of them spend more than six hours per week on them.⁵ There are studies showing that despite the extensive and gradual workload throughout their training, interest in internships and extracurricular shifts grows towards the end of the course and the need to prepare for examinations.⁵

Financial difficulties, relevant mainly for activities such as refresher and languages courses, are not part of the majority of students' realities, as these were mentioned by only 3.6% (n= 10) of them.

Besides the obstacles to start an extracurricular activity, there are other impacts related to this process, which directly affect students. One aspect worth highlighting are the losses that these activities can cause. It was found that 51.4% (n= 144) of the students feel they study less for exams and 47.1% (n= 132) miss classes due to parallel activities.

A similar situation was contemplated regarding extracurricular internships and courses: "The students use their meal times, weekends, holidays and, in many cases, overlap their curricular commitments, having to juggle schedules, skip a class here, finish a shift early there, compromising their already scarce moments of rest, leisure, physical exercise and knowledge gain in non-medical fields."¹ It was also shown that 50.4% (n= 141) have their leisure and rest negatively influenced by parallel activities. If added to the course's extensive workload, this reality increases the risk of loss of quality of life for medical students with increased stress, depression, anxiety, obsessive-compulsive symptoms and suicide, risks which are accentuated by the high level of demand of medical practice and often lead students in this field to pursue perfection²⁵

These losses can be boosted if the activities are not guided and appropriate to the course. Fortunately, we found that most of the internships done by the respondents are supervised by doctors who make up the student body, 63.5% (n= 169). Hence, we assume that students can thusly have better quality internships and better quality medical training.

There are, however, internships without supervision by professionals with appropriate teaching skills, such as university professors, which in our study amounted to 26.6% (n= 71). They could provide insufficient medical training, lacking proper scientific basis or support of tutors to assist students whenever necessary.

A similar state of affairs to the one presented above was addressed by Rego, in 2008, who reports on the situation of extracurricular internships in which students lack any supervision and, when working with a health professional (doctors, professors or not), most of the time enjoy autonomy that does not befit their level of training. Many of the institutions which offered or did not offer medical internships lacked teaching or tutoring programs to guide students adequately but offered informal supervision instead.³

We should also add that activities such as emergency shifts in early stages or in inadequate facilities or which are not exemplary for students in training or have deficient supervision, among other situations, if carried out at moments considered inadequate during the course, can hinder the learning process, for society holds the university entirely accountable.²

In view of these aspects, we notice that undergraduate medical students face highly conflicting and competitive situations among themselves, such as, for example, selections for scholarships, tutoring, research projects, high performance demands, uncertainty about the future, lack of support from colleagues and of time to pursue other activities. Constantly facing stressful situations, coping with illness and death, students must have effective strategies to surmount all obstacles adequately, thereby avoiding vulnerabilities when facing problems such as anxiety and psychosocial disorders.⁵

Thus, it would be interesting to assess the students' needs concerning the curriculum since large-scale demand for activities that complement the formal curriculum may be indicative of teaching opportunities. In addition, it is extremely important to support the students and guide them in their search for activities important for their ca-

reers and in a way so as not to damage their social and academic lives.

The School of Medicine should teach students to appreciate the formal curriculum proposed, which has been improved in recent years. Students have commented on the importance of curricular flexibility, needed for their insertion into real medical situations, as a strong component of professional learning, taking care to reconcile social life and leisure activities to their learning experience so as not to impair their psychosocial growth.⁶

What we can see, then, is that structuring medical education in the current context requires boldness so that new demands do not get framed into old teaching models, and to find their educational value in concrete situations.²⁶

CONCLUSIONS

The analyzed sample shows a similar tendency to that found in other students in various universities in the country, displaying a high rate of participation in activities that comprise the parallel curriculum with an emphasis on those that motivate them most and promote improvement of practice, enhance the curriculum and allow students to obtain a better score in CV assessment processes and medical residency examinations.. It is interesting to highlight that there is a low rate of participation in research activities, which deserves further study as a reflection of the local culture, difficulties of access or incentives.

The difficulties with which the students struggle the most are the insufficient number of posts and the demanding selective processes that lack more advertising. We also noted that the extracurricular activities currently developed display a high level of satisfaction among students, with a high percentage of supervised activities and which contributed to their medical education.

In this scenario, we suggest that alternatives be developed for some of the extracurricular activities to be incorporated into the formal curriculum, prioritizing improvement of clinical practice and accumulation of new knowledge. Implementing these measures may raise the level of medical education, which would yield more skilled and confident medical professionals and contribute to the students' achieving increasingly better results in selection processes.

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