

## PERCEIVED SATISFACTION WITH UNDERGRADUATE MEDICAL EDUCATION IN ROMANIAN AND FOREIGN LANGUAGE STUDENTS. TWO PERSPECTIVES ON MEDICAL EDUCATION

Liana Dehelean<sup>1</sup>, Ana Maria Romosan<sup>2</sup>, Ion Papava<sup>3</sup>, Radu Stefan Romosan<sup>4</sup>,  
Papazian Petru<sup>5</sup>, Babaita Mircea<sup>6</sup>

**Abstract:** Background: In Romania, foreign medical students have the possibility to learn the same curricula in Romanian, English, or French. The purpose of the study: To compare students' satisfaction with training and future career opportunities from the perspective of Romanian and foreign students. Methods: The study was conducted for terminal year medical students divided into two samples, Romanian and foreign language students. The participants were invited to fill in a satisfaction questionnaire about their professional training and to express preferences for future career. Results: Foreign students were more satisfied with the lectures and the teaching staff. They attended optional lectures more frequently in comparison with Romanian students. Foreign students were more inclined to attend medical conferences and to enroll in PhD programs. While Romanian students were more inclined to consider emigration, foreign students prefer to practice in their native countries. Conclusions: Compared to their Romanian colleagues, foreign students were more engaged in educational and research activities.

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### Introduction

In the context of adhesion to the European Union, Romanian universities made efforts to ensure curricular compatibility with other European countries. Diploma recognition, financial issues and the opportunity to study in English and French significantly increased the number of foreign students attending Romanian universities. These facilities helped foreign students to overcome linguistic barriers. The Romanian medical education system involves attending compulsory and optional lectures and practical work (mainly hospital based). Students may enrich their experiences through a transfer to other Romanian or foreign university centers. In addition, they are welcomed to join professional research teams. To be admitted to a Romanian medical university, it is compulsory to pass a written multiple choice biology and chemistry test.

According to Epstein, what and how to estimate alongside with pre-established goals is essential for the assessment of an undergraduate education (Epstein 2007). Objective, subjective or both quality indicators may be used. The objective indicators of the quality of an education system are the students' results in local and national assessments (Kellaghan & Greaney 2001). In this respect, Romanian graduates have to pass a national residency examination which allows them to choose a medical specialty according to their grades. They may also enroll in residency programs in other European countries. Foreign medical students either take examinations in their native countries or, continue their medical training in Romania. The subjective estimation of an educational system quality is reflected by the students' satisfaction feedback.

A large amount of literature data suggest that students' learning performances and clinical competences are influenced by subjective factors. These may be: the degree of satisfaction and the state of well-being (Cotton et al. 2002), the perception of the learning environment (Lizzio et al. 2002), the students' dominant attitudes (Seymour 2001), and the ability to empathize with others (Hojat et al. 2002). Since the learning environment is the direct result of the interaction between students and teaching staff, it is more likely to be influenced than attitudes, empathy and the state of well-being. In this respect the quality questionnaires may give more importance to information

<sup>1</sup> "Victor Babes" University of Medicine & Pharmacy Timișoara, Romania, Neuroscience Department, [lianadeh@gmail.com](mailto:lianadeh@gmail.com)

<sup>2</sup> "Victor Babes" University of Medicine & Pharmacy Timișoara, Romania, Neuroscience Department, [romosan@gmail.com](mailto:romosan@gmail.com)

<sup>3</sup> "Victor Babes" University of Medicine & Pharmacy Timișoara, Romania, Neuroscience Department, [papavaion@yahoo.com](mailto:papavaion@yahoo.com)

<sup>4</sup> "Victor Babes" University of Medicine & Pharmacy Timișoara, Romania, Neuroscience Department, [romosan.radu@gmail.com](mailto:romosan.radu@gmail.com)

<sup>5</sup> Politehnica University of Timișoara, Faculty of Electronics & Telecommunications, Applied Electronics Department, [petru.papazian@upt.ro](mailto:petru.papazian@upt.ro)

<sup>6</sup> Politehnica University of Timișoara, Faculty of Electronics & Telecommunications, Applied Electronics Department, [mircea.babaita@upt.ro](mailto:mircea.babaita@upt.ro)

regarding the students' perception of their learning environment. Moreover, the way the students feel about their medical knowledge and skills, may influence their future career decisions, and these issues may also indirectly reflect the quality of their professional education.

Studying medicine in a foreign country and in some cases in a non-native language, although internationally used (English), may represent an additional challenge for the students. The purpose of the present study is to compare satisfaction with professional training and future career intentions between Romanian and foreign medical students learning in Romania.

## Method

Romanian and foreign students in general medicine were asked to fill in a satisfaction questionnaire about their professional training. The students were informed about the purpose of the study and the confidentiality of the collected data. The questionnaire was conceived by the Neuroscience Psychiatric Department from Timisoara University of Medicine and Pharmacy for terminal year (6th year) medical students. The questions consisted of: socio-demographic data, students' satisfaction with teaching, self-learning or research opportunities, and intentions for future career. Students were asked to rate their satisfaction with lectures, teaching staff and practical activity on a scale from 1 (poor satisfaction) to 5 (highest satisfaction). The opportunity to participate in optional lectures, national and international conferences, case presentations, doctoral (PhD) programs, or transfers between different university centers, was assessed with yes/no questions. Students' active engagement with learning was evaluated with questions about the sources of their professional information (provided by professor, own research or both). Other questions referred to the financial situation and future intended career type (academic or not), work place (home or abroad), and practice setting (hospital versus ambulatory or both). Open ended questions were included for comments or explanations.

## Results

The study included 75 Romanian and 37 foreign students in general medicine. The mean age was 24-27 years, (SD = 1.47) for Romanian students and 26-59 years, (SD = 2.55) for foreign students, the differences being significant ( $t = -5.13$ ,  $p < 0.0001$ , 95% CI = -3.23; -1.41). This is possibly the consequence of the fact that some of the foreign students decide to attend medicine in Romania as a last resort, after confronting difficulties in their own countries. In the Romanian sample, women were predominant (59 women to 16 men), while in the foreign students sample men were predominant (24 men to 13 women). The gender differences are statistically significant ( $\chi^2 = 20.45$ ,  $p < 0.0001$ ) and reflect the trend of Romanian women being more interested than men in studying medicine.

Foreign students were significantly more satisfied with the quality of the lectures than Romanian students ( $U = 975$ ,  $Z = -2.67$ ,  $p = 0.007$ ). The same is true regarding the satisfaction with the teaching staff ( $U = 1079.5$ ,  $Z = -2.009$ ,  $p = 0.04$ ). By contrast, there were no significant differences between students with respect to their practical activity in hospitals (Table 1).

Table 2 shows the students' satisfaction with: optional lectures (ol), conference participation (c), case presentations (cp), transfers (t) between different university centers, and inclusion in PhD programs (PhD).

Foreign students' participation in optional lectures ( $\chi^2 = 5.82$ ,  $p = 0.01$ ), and medical conferences ( $\chi^2 = 16.68$ ,  $p < 0.0001$ ) is significantly higher than in Romanian students. This result may reflect a higher engagement in their medical training. Literature data suggests that the students' decision to attend non-mandatory lectures depends on several factors, mainly maximizing learning (Billings-Gagliardi & Mazor 2007). Students from universities with a higher-intensity training curriculum reported higher satisfaction than students from universities with a lower-intensity curriculum (Patel et al. 2009). We found no differences between the two samples regarding participation in case presentations.

As to their involvement in medical research, 54% of the foreign students showed interest in enrolling in PhD programs, while none of the Romanian students did. Literature data showed that students' interest in medical research had declined over time. In response to this, special programs were conceived and funded to help medical schools raise again the interest of medical students in research and academic careers (Solomon et al. 2003).

Table 1: Sample distribution according to satisfaction with lectures, professors, and hospital activity/laboratory

Satisfaction with the lectures (l) / professor (p) / hospital activity/ (h)	Romanian Students		Foreign Students	
	No	%	No	%
Level 1 (l)	1	1.4	1	2.7
Level 2 (l)	8	10.7	1	2.7
Level 3 (l)	28	37.3	8	21.6
Level 4 (l)	27	36.0	14	37.8
Level 5 (l)	11	14.6	13	35.2
Level 1 (p)	1	1.3	1	2.7
Level 2 (p)	4	5.3	0	0
Level 3 (p)	27	36.0	10	27.0
Level 4 (p)	29	38.7	12	32.4
Level 5 (p)	14	18.7	14	37.9
Level 1 (h)	2	2.7	2	5.4
Level 2 (h)	9	12.0	8	21.6
Level 3 (h)	25	33.3	7	19.0
Level 4 (h)	20	26.7	11	29.7
Level 5 (h)	19	25.3	9	24.3

Source: Authors

Table 2: Sample distribution according to satisfaction with optional lectures, conferences, case presentations, rotations, and PhD

Satisfied with optional lectures (ol) / conferences (c) / case presentations (cp) / rotations (r) / PhD program (PhD)	Romanian Students		Foreign Students	
	No	%	No	%
Yes (ol)	54	72.0	34	91.9
No (ol)	21	28.0	3	8.1
Yes (c)	26	34.7	28	75.7
No (c)	49	65.3	9	24.3
Yes (cp)	70	93.3	34	92
No (cp)	5	6.7	3	8
Yes (r)	5	6.7	19	51.4
No (r)	70	93.3	18	48.6
Yes (PhD)	0	0.00	20	54
No (PhD)	75	100.0	17	46

Source: Authors

Table 3: Sample distribution according to the source of information

Source of professional information	Romanian Students		Foreign Students	
	No	%	No	%
Teaching staff	54	72.0	14	37.8
Teaching staff and self-taught resources	18	24.0	17	46.0
Self-taught resources	3	4.4	6	16.2

Source: Authors

Table 4: Sample distribution according to students' perception of their financial situation

Financial situation	Romanian Students		Foreign Students	
	No	%	No	%
Not good	3	4.0	2	5.4
Average	67	89.3	21	56.7
Very good	5	6.7	14	37.8

Source: Authors

There are significant differences between samples regarding transfers between different university centers ( $\chi^2 = 29.38$ ,  $p < 0.0001$ ). Whereas 51.4% of the foreign students found mobility between medical schools opportune, only 6.7 % of the Romanian medical students favored gaining experience through transfers.

Concerning the sources of professional information (Table 3), there are significant differences between the two samples ( $\chi^2 = 13.18$ ,  $p < 0.0001$ ;  $U = 885$ ,  $Z = -3.6$ ,  $p < 0.0001$ ). The majority of the Romanian students prefer the information provided by the teaching staff, while foreign students use self-taught resources (through the internet or textbooks) in greater numbers than their Romanian colleagues. The strong point of self-taught resources is that it may reflect a more active engagement in the educational process. The downfalls might be a less interactive relationship with the teaching staff with fewer chances to ask questions and receive feedback. As a consequence, motivation for study may decrease (Schreiber et al. 2010), and the professor’s influence as a model may disappear (Harden & Crosby 2000).

With respect to the financial situation, there were statistically significant differences ( $U = 951.5$ ,  $Z = -3.77$ ,  $p < 0.0001$ ) between Romanian and foreign students as presented in Table 4. This finding has to be interpreted considering the nationality of the foreign students. More than half of them (56.8%) came from higher income European countries, mainly Germany (35.1%). The rest arrived from Middle East (13.7%), 18.9% from Africa, 8.1% from India, and 2.7% are Canadian citizens.

This also explains the differences found between the two samples regarding the intended country of practice (Table 5). More than half of the Romanian students wish to emigrate after graduating. By contrast, only 32.4% of the foreign students declared their intention to practice in other countries than their native ones. The differences are statistically significant ( $\chi^2 = 4.35$ ,  $p = 0.04$ ;  $U = 1097.5$ ,  $Z = -2.07$ ,  $p = 0.038$ ). Considering the foreign students’ emigration choices, 8.1 % wish to remain in Romania, 8.1% intend to practice in Germany, 5.4% consider employment in the United Kingdom, 2.7 % plan to work in the USA, while 8.1% didn’t mention where they intend to emigrate. None of the Romanian students wished to indicate the preferred country of emigration. Financial incentives and better working conditions motivate 40% of the Romanian students to emigrate. Some students didn’t want to, -or could not offer a reason for emigration (20% of the foreign students and 60% of the Romanian students). Family reunion was the main reason given by the students who intend to remain or return to their native country (44% of foreign and 11.4% of Romanian students). In the Romanian sample 88.6% of the students wished not to-, or could not give a reason for staying in Romania after graduation.

Table 5: Sample distribution according to the intended place of future practice

Place of future medical practice	Romanian Students		Foreign Students	
	No	%	No	%
Abroad	40	53.3	12	42.4
Native country	35	46.7	25	67.6

Source: Authors

Table 6: Sample distribution according to the intended place of future practice

Medical speciality	Romanian Students		Foreign Students	
	No	%	No	%
Surgical specialties	9	12	14	37.8
Non-surgical specialties	66	88	23	62.2

Source: Authors

Table 7: Sample distribution according to the intended place of future practice

Setting of medical practice	Romanian Students		Foreign Students	
	No	%	No	%
Hospital	28	37.3	22	59.5
Ambulatory	5	6.7	4	10.8
Hospital + ambulatory	27	36	7	18.9
Academic career + hospital or ambulatory	15	20	4	10.8

Source: Authors

84% of the Romanian and 85.7% of the foreign students intend to enroll in a postgraduate medical training as residents. We found significant differences between the two samples regarding the intended medical specialty ( $U = 1029$ ,  $Z = -3.16$ ,  $p = 0.002$ ;  $\chi^2 = 10.13$ ,  $p = 0.003$ ). While foreign students favored significantly the surgical specialties, Romanian students expressed their option for nonsurgical specialties (Table 6). The difference is probably the consequence of the majority of men among the foreign students, while in the Romanian sample women predominate.

Regarding the postgraduate career setting, the students were presented with the following options: medical based (hospital only, ambulatory only, both hospital and ambulatory), and / or academic based (Table 7). We found significant differences between the samples ( $U = 1307.5$ ,  $Z = -2.3$ ,  $p = 0.02$ ) with foreign students preferring an exclusive hospital work setting, while Romanian students wishing to have a mixed hospital and ambulatory practice, some of them besides an academic career. These differences may reflect possible financial concerns among Romanian physicians compared with their colleagues working abroad.

### Conclusions and limitations

Compared to their Romanian colleagues, foreign students are more satisfied with the educational system and more engaged in the learning process and research activities. In this context, they appear to be more satisfied with lectures and teaching staff. Additionally, they show more engagement in acquiring professional information through optional lectures, conferences, self-research, and transfers between different university centers. Research is also, taken into consideration. No differences were found between Romanian and foreign students with respect to practical training through case presentations and hospital work. Whether the greater satisfaction of the foreign students with the teaching staff is mutually related to their more active involvement in educational activities, is still a matter of debate.

As to future career options, the poorer financial situation of the Romanian students urges them to consider emigration or engagement in a multifaceted practice (combined hospital, ambulatory and academic). Family issues appear to be the main reason to remain or return to the student's native country, while financial dissatisfaction stimulates emigration.

The present study was conducted at Timisoara University Center, and does not intend to generalize the results for the whole country.

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