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THE STRENGTH OF MOTIVATION OF MEDICAL STUDENTS IN ROMANIA IN THE CONTEXT OF MIGRATION OPPORTUNITIES

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The Strength of Motivation of Medical Students in Romania in the Context of Migration Opportunities

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Abstract

In this study we aim to study in what way the Strength of motivation of the Romanian medical students has been influenced by harsh economic conditions that led to a massive migration. We conducted a cross-sectional study on a sample size of N=1516. We applied The Strength of Motivation for Medical School-Revised (SMMS) questionnaire and a questionnaire that examines the opinion of the students about migration. The mean value of motivation was 48 (maximum score is 75), 85% of the students have the intention to migrate. The determining factor of studying medicine abroad that correlates significantly with the Strength of motivation is represented by the better work conditions. Students studying in the South of the country want to practice primary in France, students in the North West and in the Center choose to practice medicine in Germany, and students from the East would like to go to Great Britain. The students with a high Strength of motivation are driven by the desire of the students to practice medicine abroad. Higher salaries don't represent the principal factor for leaving the country. The

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percent of 85% of the students aiming to practice medicine abroad, represent a concerning result for all of us because it took the form of brain drain.

Keywords: the strength of motivation, medical students, migration, willingness to sacrifice, readiness to start, persistence, social status.

Introduction

Motivation is considered as the reason underlying behaviour. Brophy (2004) defined motivation as a theoretical concept that is used to explain the beginning, direction, force and insistence of goal-oriented behaviour. Motivation is of particular interest to educational psychologists because of the crucial role it plays in student learning. In education, motivation refers to a person's willingness to put forth effort in order to achieve educational goals. Its strength is in balance with whatever energy the student is willing to invest, or the sacrifices the student is willing to make to meet those needs (Santrock, 2010).

Literature review

Medical students are known to be highly motivated students, if measured by drop-out rate and time investment and compared with other students in higher education. Most advocate that admission procedures should prefer students with genuine, intrinsic interest in medicine with altruistic care-directed motives, while measuring the Strength of motivation is a more reliable instrument for students who have entered medical school (Nieuwhof *et al.*, 2004). The Strength of the motivation is translated into the amount of time and energy people are willing to invest in learning (Bradford, Brown, & Cocking, 2000).

Students generally have multiple reasons for pursuing a medical career. The reasons are mainly altruistic (eg, helping patients, serving the society) (Gasiorowski, Rudowicz, & Safranow, 2015; Puljak *et al.*, 2007; Diwan *et al.*, 2013; Girasek, *et al.*, 2011; Heikkilä *et al.*, 2015; Pagnin, *et al.*, 2013; Pruthi, *et al.*, 2013) but also related to interest in science (Gasiorowski, Rudowicz, & Safranow, 2015; Girasek, *et al.*, 2011), vocation (Heikkilä *et al.*, 2015), career opportunities (Girasek *et al.*, 2011; Heikkilä *et al.*, 2015), high income (Gasiorowski *et al.*, 2015; Heikkilä *et al.*, 2015), prestige (Gasiorowski, Rudowicz, & Safranow, 2015; Diwan *et al.*, 2013; Heikkilä *et al.*, 2015) and family expectations or pressure (Diwan *et al.*, 2013; Pruthi, *et al.*, 2013).

The economic crisis in Romania has been going on for decades and has affected many domains, including the medical sector. Poor socio-economic conditions affected medical personnel in many different ways, so that the motivation may

decline. Romania's accession to the European Union (EU) in 2007 created new migration opportunities (Vladescu, 2016). There is no source of data within the country to establish the exact magnitude of the exodus or possible returns of doctors trained in Romania. In 2017, there were 2.9 practising doctors per 1 000 population, the third lowest figure in the EU (EU average 3.6). Migration outflows of medical staff seeking better career and remuneration prospects abroad have contributed to the development of a domestic shortage of health professionals, with negative consequences on care accessibility (European Commission, 2019).

The present study was conducted to investigate the Strength of motivation of Romanian medical graduates in relation with an analysis of prospective migration of medical students in order to choose a career abroad. We aim to study in what way the Strength of motivation of the Romanian medical students is influenced by harsh economic condition in the last decades in Romania that lead to a massive migration of medical personnel.

Methodology

A cross-sectional, multi-centric study, conducted in the period January 2018 - January 2019 on a sample size of N=1516 medical students from 11 Medical Schools in Romania (Bucharest, Craiova, Sibiu, Iasi, Cluj-Napoca, Targu-Mures, Timisoara, Constanta, Oradea, Galati, Brasov).

The participants completed a questionnaire after they had signed an informed consent which explained the study and asked for the participants' consent to participate in the study. The participants were instructed for answering to the questionnaires honestly and not to leave any item unanswered. Responses were anonymous.

The questionnaire consisted of three parts: (1) socio-demographic factors, (2) a psychometric scale measuring assessing students' motivation for medical studies "The Strength of Motivation" developed by Nieuwhof *et al.*, (3) a questionnaire assessing the opinion of the students regarding practicing medicine in Romania or in other country and the reasons supporting that opinion.

The Strength of Motivation for Medical School-Revised (SMMS) questionnaire is an instrument assessing students' motivation for medical studies defined as "the applicant's or student's readiness to start and continue medical training regardless of sacrifices, setbacks, misfortune or disappointing perspectives. It consists of 15 items and uses a 5-point Likert scale ranging from Strongly Disagree to Strongly Agree. The SMMS comprises three factors, willingness to sacrifice his personal and social life in order to meet demands of the medical study, readiness to start enter medical study, and persistence to continue medical study even in the face of difficult circumstances (Nieuwhof *et al.*, 2004).

This was also supported by theoretical explanation of three separate subscales as covered in the definition of the Strength of motivation for medical school. The three subscales for the Strength of motivation for medical study could be labelled as (Kusurkar *et al.*, 2011): 1. Willingness to sacrifice (Subscale 1) (item 5, 7, 9, 10, 12); 2. Readiness to start (Subscale 2) (item 1, 3, 6, 11, 16); 3. Persistence (Subscale 3) (item 2, 4, 8, 13, 14). Summing the scores for the three subscales gives a Total Strength of Motivation score. Subscale scores can range from 5 to 25, so total scores can range from 15 to 75. As the authors highlighted, Strength of motivation does not necessarily correlates with quality of motivation.

Our questionnaire comprises of 9 questions (items) that examine the opinion of the students about migration and practicing medicine abroad, as follows 1. What is the main motivation for choosing to study medicine? 2. Are you consider the possibility of practicing medicine abroad? 3. In what country did you think you wanted to practice medicine? 4. What is the main reason you chose this country? 5. Do you know the language well enough to practice in that country? 6. At what point in your training as a medical student did you think of practicing abroad? 7. What is the determining factor for which you would leave the country? 8. If you intend to leave the country at some point, would you like to return to work in Romania? 9. If you went abroad what you determine you to return to Romania?

Statistical analyzes were performed using Microsoft Excel 2010 and IBM SPSS 20.0. Descriptive analyzes (frequency/percentage, mean, minimum, maximum) and statistical tests respectively correlations (Crosstabs, ANOVA, t test student) were used for the synthesis of the results. Tests were interpreted at a significance level $\alpha = 0.05$. If a variable had missing data, percentages were calculated as per the remaining number of available data points. The results were described as odds ratios (OR) and their corresponding 95% confidence.

Demographics

The participants involved in the study were in the 1st year (331), 2nd (325) year, 3rd year (263), 4th year (213), 5th year (175), 6th year (209); 71% of the respondents were females. 33% are from Bucharest, 15% from Craiova, 12% from Timisoara, 8% from Iasi, 7% from Brasov, 7% from Galati, 6% from Sibiu, 5% from Oradea, 3% from Cluj-Napoca, 2% from Targu-Mures and 1% from Constanta).

The score of the strength of motivation

The motivation scale goes from 25 to 75 with a mean value of motivation of 48.21 (Figure 1).

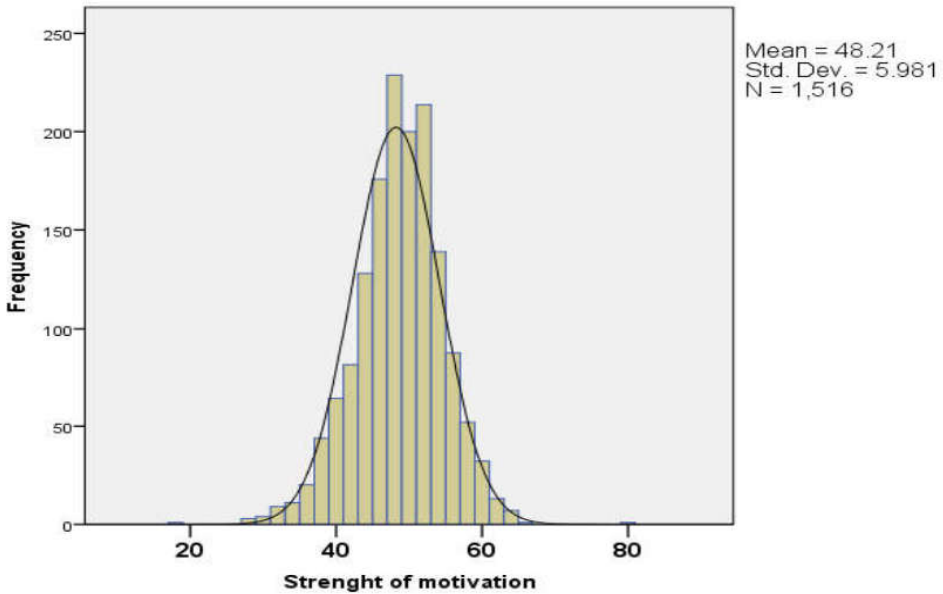


Figure 1. The mean values of the Strength of motivation

The distribution of The Strength of motivation in relation with all the university centers

The distribution of the Strength of motivation in relation with all the university centers shows the highest total scores in Constanta (47.07), Sibiu (46.44), Oradea (45.93) in comparison with the “traditional” Medical School like those in Bucharest (44.69), Iasi (44.32), Cluj-Napoca (44.07), Targu-Mures (44.22), Timisoara (44.96), at Sig 0.004 (Figure 2).

The distribution of The Strength of motivation in relation with all the university centers

Respondents who consider that they have the opportunity to practice abroad (Mean =48.59) and those who want to alleviate patients ‘suffering (to have a positive contribution in patients’ lives) (Mean=48.62) are more motivated to choose medical school compared to respondents who choose medical school for the social position offered (Mean=46.79) or due to family pressure (Mean=44.52) (Table 1).

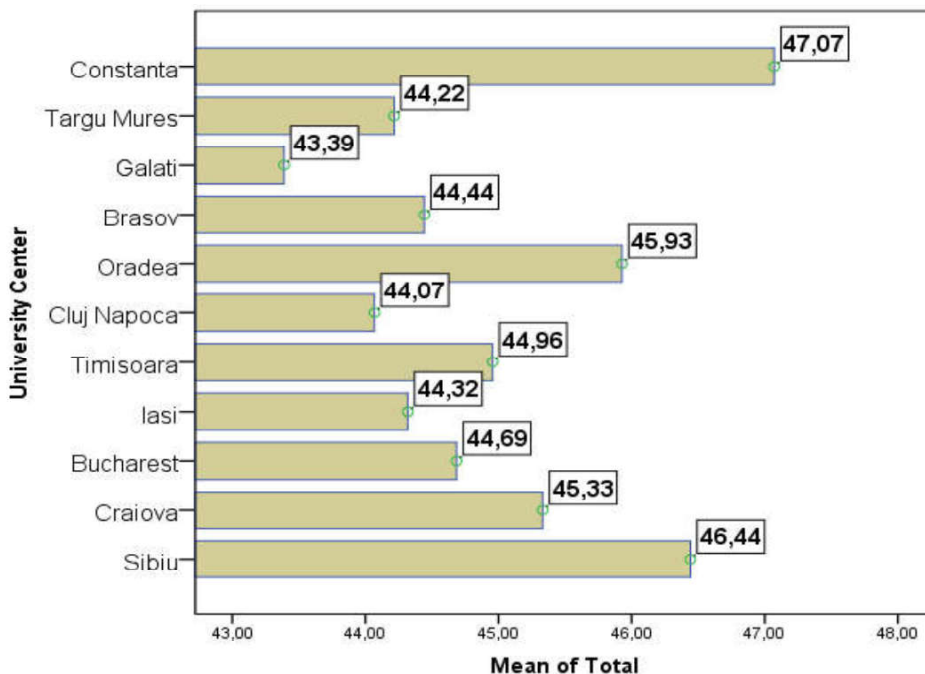


Figure 2. The distribution of the Strength of motivation and the university centers in Romania

The reason for going to another country to practice medicine most often mentioned in the students' answers and which correlates at a significance level with the Strength of motivation (Sig 0.003) was the one regarding certain particularities of the medical system (e.g., poor financing, poor working conditions, corruption) (Mean=48.93) to the detriment of some reasons that would seem more pragmatic - knowing the language (Mean=47.80) or accessibility (Mean=47.57) (Table 1).

The answers of the respondents revealed that the moment of preparation for leaving the country that most strongly correlates with the Strength of motivation (Sig .001) is the one from the start of the preparation - in the first years of college (Mean=48.78) and at the entrance to the faculty (Mean=48.69) (Table 1).

The determining factor of leaving medicine abroad that is statistically significant with the Strength of motivation (Sig .000) is represented by the better work conditions (Mean=49.20), followed by higher salaries (Mean=49.04), other mentalities in the foreign health system (Mean=47.80) (Table 1).

Table 1. The association between The Strength of Motivation and The main motivation, The reason for leaving another country, The moment of thinking to leave the country and The determining factor of leaving

Items	Willingness to sacrifice		Readiness to start		Persistence	
	F	Sig	F	Sig	F	Sig
What is the main motivation for choosing to study medicine?	13.445	0.000	20.189	0.000	14.485	0.000
Are you consider the possibility of practicing medicine abroad?	2.909	0.581	20.785	0.000	2.399	0.122
In what country did you think you wanted to practice medicine?	0.964	0.448	2.762	0.011	2.34	0.030
What is the main reason you chose this country?	1.215	0.303	10.431	0.000	1.159	0.324
Do you know the language well enough to practice in that country?	0.731	0.393	0.967	0.326	4.856	0.028
At what point in your training as a medical student did you think of practicing abroad?	1.149	0.332	7.165	0.000	6.664	0.000
What is the determining factor for which you would leave the country?	9.391	0.000	8.742	0.000	2.839	0.023
If you intend to leave the country at some point, would you like to return to work in Romania?	6.842	0.009	2.518	0.113	15.072	0.000
If you went abroad what you determine you to return to Romania?	13.63	0.000	4.484	0.004	13.327	0.000

Note: Subscales of the Strength of motivation in association with The motivation to study medicine (Answer "Alleviate suffering"), The determining factor to practice Medicine abroad (Answer "Better working conditions"), Reason to return to Romania (Answer "The desire for achievement in one's own country"). There is a statistically significant association between the score of The Strength of Motivation and The main motivation, The reason for leaving another country, The moment of thinking to leave the country and The determining factor of leaving.

Additionally, each of three subscales correlated at a significance level in particular, with other items, so that:

- Willingness to sacrifice is significantly correlated with Item 8) The desire to return to the country (Answer “Yes”) (Table 2)
- The readiness to start is statistically significant correlated with Item 2) Possibility of practicing medicine abroad (Answer “Yes”), Item 3) The country where I would like to practice medicine (Answer “Germany” and “Nordic countries states”), Item 4) The reason for choosing the country to practice medicine (Answer “Certain particularities of the medical system”) and Item 6) The moment of the decision to practice abroad (Upon entering in the college) (Table 2).
- The subscale Persistence is significant correlated with Item 5) Knowing the language of the country in which I would like to practice (Answer “No”), like The readiness to start is associated with The country where I would like to practice medicine (Answer “Germany” and “Nordic countries”) and The moment of the decision to practice abroad (Answer “Upon entering in the college”) and like Willingness to sacrifice with The desire to return to the country (Answer “No”) (Table 2).

Table 2. The association between the subscales of the Strength of motivation (Willingness to sacrifice, Readiness to start, Persistence) and the Items in the questionnaire regarding the intention to leave Romania for practicing medicine

Items	Willingness to sacrifice		Readiness to start		Persistence	
	F	Sig	F	Sig	F	Sig
What is the main motivation for choosing to study medicine?	13.445	0.000	20.189	0.000	14.485	0.000
Are you consider the possibility of practicing medicine abroad?	2.909	0.581	20.785	0.000	2.399	0.122
In what country did you think you wanted to practice medicine?	0.964	0.448	2.762	0.011	2.34	0.030
What is the main reason you chose this country?	1.215	0.303	10.431	0.000	1.159	0.324
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If you intend to leave the country at some point, would you like to return to work in Romania?	6.842	0.009	2.518	0.113	15.072	0.000
If you went abroad what you determine you to return to Romania?	13.63	0.000	4.484	0.004	13.327	0.000

The countries where the students would like to practice medicine

The participants in our study mentioned the following countries where they would like to practice medicine: 19% (Romania), 18% (Germany), 14% (France), 13% (Great Britain), 7% (Nordic countries), 6% (USA), and 22% other countries (Switzerland, Italy, Netherlands, Canada, Austria, Spain, etc.). We can observe that approximately one fifth of the students want to practice medicine at home, in Romania (*Figure 3*).

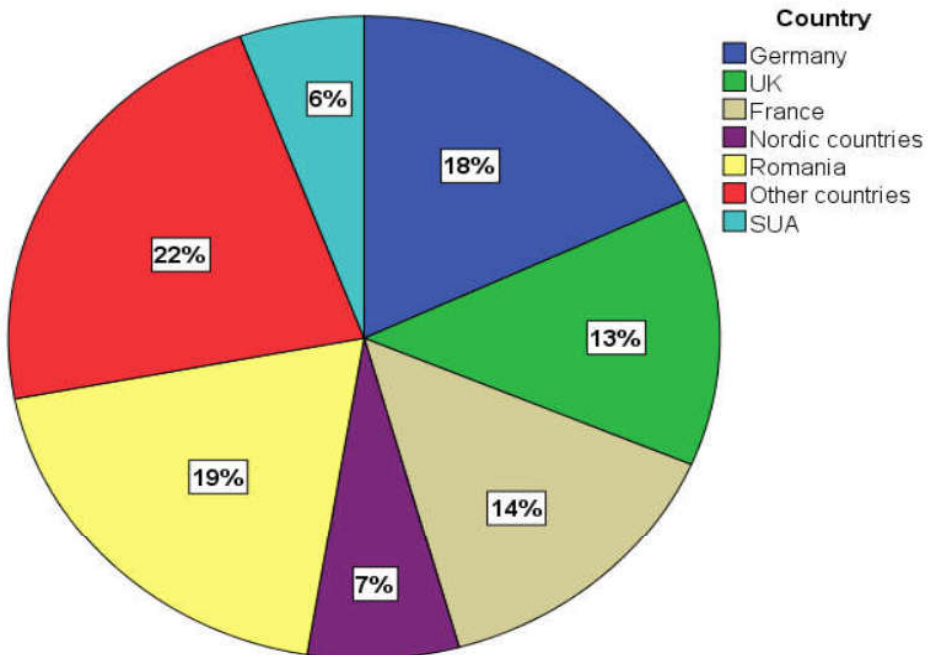


Figure 3. The distribution of the foreign countries where the medical students would like to practice medicine

There is a statistically significant correlation between the University City and the country in which they want to practice ($p = 0.000 < 0.05$, $\chi^2 = 109.051$). Thus, most of the students in Bucharest want to practice in France and Germany, and the students in Oradea want to practice in Germany and Great Britain. We find a statistically significant correlation between the region where the respondent's study and the country in which they want to work ($\chi^2 = 31,013$, $p = 0.002$). Students studying in the South of the country (Wallachia) have a preference to practice in other countries, Romania, France and Germany while students in the North-West and Center (Transylvania) choose to practice medicine in other countries, Germany and Romania. The favorite countries for studying medicine of the students from the East (Moldavia) are Romania, Great Britain and France (*Table 3*).

Table 3. The association between the region in Romania and the countries where the medical students would like to practice medicine

Region	The country where I want to practice medicine							Total
	Germany	Great Britain	France	Nordic countries	Romania	Other countries	SUA	
South	119	88	119	53	138	174	47	738
North-West and Center	68	78	56	29	74	80	22	407
East	30	39	35	16	40	50	11	83
Total	268	202	214	103	291	335	85	1498

The distribution of the Strength of motivation in relation with the countries where the medical students want to go to practice medicine

Our data show that the highest total scores were at the students who want to migrate to France (45.54), Nordic countries (45.43), Germany (45.33) at Sig .000. The students who want to practice medicine in Romania had the lowest score of the Strength of motivation (43.48) (*Figure 4*).

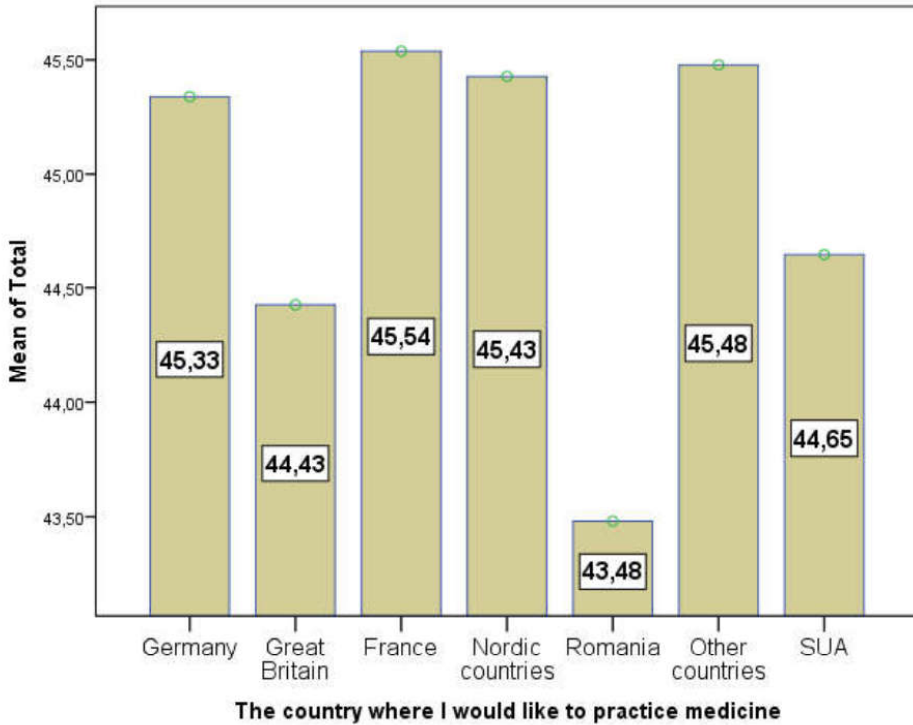


Figure 4. The association between the mean of the Strength of motivation and the countries where the medical students would like to practice medicine

The relation between knowing the language and the possibility to practice medicine abroad

Between knowing the language and the possibility to practice medicine abroad there is a statistically significant correlation at a confidence threshold of 99.9% ($\chi^2 = 0.000, p < 0.001$). Lack of knowledge of the language does not prevent the possibility of practicing medicine abroad.

Discussion

The mean value of The Strength of motivation of the medical students 48.21, a value however pretty much lower than the maximum value of 75. Taking into account the three subscales, the students have better scores at the first two, “*Willingness to Sacrifice*” and “*The readiness to start*” and a low score at “*Persistence*”.

The first subscale of The Strength of motivation, “Willingness to Sacrifice” which measure the willingness of a student to sacrifice for his/her medical study is significantly associated with The desire to come back in Romania. So, returning in Romania after a hypothetical period of practicing the medical profession abroad is viewed by the students as a manifestation of sacrifice of doing this job. Therefore, these results show that for Romanian medical students, the normality of practicing medicine at home is associated with sacrifice.

The subscale “*The readiness to start*”, measuring the readiness and will to enter medical study has a significant association with all the items from the questionnaire that refer to the possibility of leaving the country to practice the medical profession. In this sense, the strength of the motivation is higher at the students who want to leave the country upon entering in the college and put in their mind to emigrate to Germany and Northern States due to the peculiarities of their medical system.

The scale “*Persistence*”, measuring the persistence in medical study in spite of unfriendly circumstances during or after the study is correlated with the other answers, anterior mentioned and is not significantly correlated with knowing the language of the country in which they would like to practice. This means that unknowing the foreign language (like German or Scandinavian language) doesn't represent an impediment of studying medicine. The *Strength of motivation*, with all the subscales is the highest at the students who study medicine to alleviate of suffering of the patients; if it intervenes the possibility to practice medicine abroad, the determinant factor would be better working conditions and the reason to return to Romania would be the desire to achieve in one's own country. In other words, the students with a high strength of motivation are driven by the intrinsic motivation, to cure the patients.

Our study shows that the score of *The Strength of motivation* is higher at the students who want to migrate to France, Nordic countries and Germany and, on the contrary is lower at the students who want to practice medicine in Romania. This means that the strongest stimulus for increasing *The Strength of motivation* is represented by the intention to leave Romania and practice medicine abroad.

The results of our study, together with other studies indicate the socio-economic factors as the main raisons of the migration of medical doctors in Romania. Anyway, taking into consideration the push and pull model (Angelini, Brugiviani, & Weber, 2015) regarding poverty and development discrepancies, we can ask ourselves if this migration is a consequence of push factors (level of payment and cost-benefit calculation) or of pull factors (professional factors and working conditions in the host country).

Anyway, it's seems that entrance to a Medical school in Romania it's a kind of trampoline to practice medicine in a country, usually a country in Western Europe, where the medical students can find favorable conditions for their professional development. Our study points out that the Strength of motivation has higher scores

in Constanta, Sibiu, Oradea, recently emerged university centers in comparison with lower scores in Bucharest, Iasi, Cluj-Napoca that are traditional university centers with over 100 years of existence.

Many Romanian doctors have also left the country to practice abroad - predominantly in Western Europe - as indicated by data from the destination countries. Between 2007 and 2013, 3428 doctors requested a certificate to work in Germany, 3035 doctors wanted to work in UK and 2279 doctors wanted to migrate in France (Boncea, 2015). The results of our study as regard the students' preferences for studying in foreign countries can be distributed according to the Romanian historical regions like - The South region - Wallachia, the North-West region - Transylvania and the East - Moldavia. So that, the students from Wallachia has the intention to practice medicine mostly in Romania, France and Germany while the students from Transylvania has the intention to practice medicine mostly in Germany and Romania. Students from Moldavia want to study medicine primarily in Romania, secondly in Great Britain and, third, in France.

Our results overlap somehow those mentioned by Sechet and Vasilcu (2015) about migration of the romanian physicians, but makes some differentions between regions. While Germany is a country with the greatest desirability in Transylvania and France is a favorite country for migration for the country in the South. The students from the South has a greater preference for studying in Romania than the students in the North-West and in the Center. The last group came from a region where lived many ethnic Germans and consecutively, the German language has a large share in general population. In Moldavia, like in the South, Romania is the first option, Great Britain intervene in the top of preferences and Germany occupy the fourth position.

In our study, respondents who consider that they have the opportunity to practice medicine abroad and those who want to alleviate patients 'suffering (to have a positive contribution in patients' lives) are more motivated to choose medical school compared to the respondents who choose medical school for the social position offered or due to family pressure or feel a lower level of motivation or are less motivated.

In the present study, the opportunity to practice abroad and, very closely, alleviating patients' suffering exceeds the other motives like enjoying high social status or responding to family pressure due to the expectation of a high and stable income and job security.

So, the most important motivation for studying medicine is the opportunity to leave the country. EU membership has remarkably facilitated the physicians' emigration, because it assures full recognition of their qualifications. According to the official statistical data, as of 2013 more than 14 thousand physicians, representing More than 26 percent of the total number of Romanian physicians work abroad. Also, the number of Romanian students abroad more than doubled

in the last 16 years, a large majority of them preferring to remain abroad (League of Romanian Students Abroad, 2014).

In our study, although the result according to which the main reason to study medicine is to alleviate suffering in the most students, the mean of the variable (*The main motivation to study medicine*) point out the other answer, namely, the opportunity to practice medicine abroad is statistically significant. The reason for going to another country to practice medicine most often mentioned in the students' answers and which correlates significantly with the Strength of motivation was the one regarding certain particularities of the medical system (e.g., poor financing, poor working conditions).

According to estimates made by OECD Health Statistics (2020) total expenditure on health, expressed as a percentage of gross domestic product (GDP) were in Romania at a level of 5.7 percent in 2019, the lowest in the European Union while the average for the 27 countries of European Union (EU) has experienced much higher values and increasing values, 8.3 percent. The highest values of total expenditure on health share of GDP were recorded in this period in Germany (11.7%), France (11.2%), Austria (10.4%), Denmark (10.0%), and Sweden (10.9 %) (OECD Health Statistics, 2020).

Public expenditure on health/inhabitant in the same period was also the lowest in comparison with EU countries (494 euro/inhabitant), while the average in the European region was 2.887 euro/inhabitant. Much higher levels and increasing levels were recorded in countries such as Germany (4.459), France (3.883), Denmark (5.134), and Sweden (5.206) (Eurostat, 2017). The answers of the respondents revealed that The moment of the decision to practice abroad that most strongly correlates with the Strength of motivation is the one from the beginning of the preparation - at the entrance to the faculty and in the first years of college.

In this study, 84.7% of the respondents are considered to seek employment abroad after graduation. The total percentage of students that are considering emigration (84.7%) is higher than in other Eastern European countries. For comparison, Polish students estimated the likelihood of emigration to be around 50% (Krajewski-Siuda *et al.*, 2012). The determining factor for leaving country and practice medicine abroad that correlates significantly with the Strength of motivation is represented by better working conditions, following by higher salaries, other mentalities related to the medical act and interpersonal relationships at work.

Salaries for young doctors in Romania are 10-to-15 times lower than in Western Europe and low in comparison to the average Romanian salary. A resident in Romania typically earns €200, as compared the average worker's salary of €320 (Haivas, 2010). Resident doctors' gross salaries will also increase by 151% to 287%, depending on the specialty. A first-year resident, who currently has a gross salary of RON 1,985, will reach a gross wage of RON 5,700 (EUR 1,225). A primary care physician, who had a salary of RON 3,900 in 2017 and RON 4,100

in January this year, will reach a net wage of RON 9,106 (EUR 1,960). Some salaries will reach over EUR 4,000 (INSIDER, 2018).

In Germany, in their first year, doctors will roughly get 4,000 Euro/month, and after 3-5 years this can grow to more than 5,000 Euro/month before tax (Wang, 2015). In Eastern Europe, major reasons for leaving Lithuania were higher salary, better professional opportunities, and better quality of life (Stankunas, Lovkyte, & Padaiga, 2003), similarly to the findings among Czech physicians (Hnilicová, Vavrecková, & Dobiášová, 2007). An important factor that intensified physician brain drain after 2004 was the wage differential (WHO, 2006). More than financial motivation, 157 of the 182 Romanian doctors interviewed cited socio-professional factors as a motivation of their emigration project. The French medical system is perceived as being able to offer greater job satisfaction with modern medical equipment, ensuring medical procedures are safe and carried out within a well-financed healthcare system and a stimulating professional environment (Delautre, Cohu, Lequet-Slama, 2008).

The reduced level of public resources allocated to health directly affects the quality of the medical act and determines more and more Romanian doctors to emigrate. The work of doctors is characterized by the lack of medicines, materials, the technological deficit, the conditions of stress, the strain at work, the lack of recognition and respect for the importance of the work they perform and the corruption in the system. Romanian doctors working on average 5-6 times more in terms of quantity and difficulty than the European average. Although Romania is facing a shortage of medical personnel, very few positions are declared vacant where staff is needed (Feraru, 2013).

In our study approximately 85% of the students have the intention to study some courses or practice medicine abroad. Many medical students want to leave the country to practice abroad - predominantly in Western Europe. The highest total scores were at the students who want to migrate to France, Nordic countries, Germany. In this matter, this study resemble data from another Romanian surveys that point out carried out in some medical schools, the majority (85%) of Romanian students reported their intention to search for postgraduate training and employment abroad on graduation or completion of their training. Among the students who are planning to emigrate the preferred host countries are Germany (34.1%), France (20.0%), and Great Britain (19.6%). 28.5% of the students do not know yet to which country they want to emigrate (Suciu *et al.*, 2017).

Conclusion

The wish of every medical doctor must be professionalism. In order to have as many as possible professionals in the Health System, firstly, the society must assure to the students a competent medical education. After that, the young doctor has to meet favorable socio-economic conditions for professional development so that he will be able to treat his patients with humanitarianism and competency.

Aiming to examine the perspective of Romania medical students to the score of *the strength of motivation* of the student had been situated in slightly over the middle of the scale. In this sense, our study show that the students scored better to the “willingness to sacrifice for his/her medical study” and to “readiness and will to enter medical study” and less to “the persistence in medical study in spite of unfriendly circumstances”. We find significant associations between these and the intention to emigrate, so that *the strength of motivation*, predominantly consist in: students have a strong will to leave since the beginning of college especially those who want to go to Germany, France and Nordic countries; unknowing the foreign language doesn't represent an impediment of studying medicine; still they consider as target their come back, at some point, to practice medicine at home. The *strength of motivation* has a significant correlation with *the main motivation of studying* medicine, namely, the opportunity to practice medicine abroad. This fact became possible due to the facilitation of the physicians' emigration, because it assures full recognition of their qualifications (the pull effect) and due to the harsh socio-economic conditions in Romania (the push effect).

The determining factor for leaving country and practice medicine abroad that correlates significantly with the *strength of motivation* is related with better working conditions. It is well known that medical personnel in Romania is dealing the underfunding, lack of medical equipment, organizational stress, workload due to the insufficient medical personnel, etc. It's worth mentioning that, in this study, higher salaries don't represent the principal factor for leaving the country.

Approximately 85% of the students have the intention to study some courses or practice medicine abroad. The highest total scores were at the students who want to migrate to France, Nordic countries, Germany. In the South (Wallachia) students aim to go to France or remain in Romania, in North-West (Transylvania) they want to go mostly in Germany and France and in the East (Moldavia) students would choose Romania and Great Britain. As a final conclusion, the percent of 85% of the students aiming to practice medicine abroad, even for a limited period represent a concerning result for all of us. More than that, we had to interpret this result in a specific context because on March 1st, 2018 the salaries of doctors increased by over 70%. Even so, the results of our study show that almost one year later, Romanian medical students still are thinking to the possibility to leave the country and practice medicine abroad. This phenomenon looks like a brain drain and put serious problems for the Romanian Health System.

Recommendations

In this study the conclusions show a worrying situation existing in the Health System in Romania regarding the availability of the medical personnel. In the European medical reports, it is mentioned the exodus of the medical doctors from Romania and other East-European countries.

The results of our study depict this situation from the inside of the Romanian Health System. One of the most important idea, subserving the migration phenomenon refers to the huge number of medical students (85%) intending to leave Romania in order to practice medicine abroad. In the second place, the highest scores of *the strength of motivation* are encountered at the students that intend to leave Romania and the main motivation for this is represented by the better work conditions in the western European countries.

Pursuing these results, we suggest some measure to be implemented in the Health system, respectively, the University Medical System:

- Increasing financial funds for improving the work conditions in the health system
- Sustaining high salary incomes of the medical personnel due to their critical role in a modern society
- Implementing of some rules of promotion of medical personnel, based on meritocracy
- Imposing some reforms in the health system/university medical system to increase the intrinsic motivation of the medical students (helping patients)

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