

The analysis of brain circulation of health care professionals in Serbia, Croatia and Slovenia

Analiza cirkulacije mozгова profesionalaca zdravstvene nege u Srbiji, Hrvatskoj i Sloveniji

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Abstract

The deficiency of medical care professionals is a very popular economic and social problem that's becoming an important issue for a lot of countries. This paper aims to give an overall review and analysis of research results about the existence and reasons for migration (circulation) of highly educated healthcare personnel in Serbia, Croatia and Slovenia. The research that has been done in June 2022 included 604 students from three higher education institutions in Serbia, Croatia and Slovenia. The results, of which we came, showed that brain circulation happens mostly from economically weaker countries to the more developed ones, while better life standards, an opportunity for better studies and getting more practical skills are the most frequent motives for healthcare students.

Keywords: brain circulation, qualified workforce, knowledge transfer, health care professionals, labour market

Sažetak

Nedostatak medicinskog osoblja je veoma aktuelan ekonomski i društveni problem koji postaje sve značajniji u mnogim zemljama. Cilj ovog rada je da pruži pregled i uporednu analizu rezultata istraživanja o postojanju i razlozima za migraciju odnosno cirkulaciju visoko obrazovanih profesionalaca zdravstvene nege, na teritoriji Republike Srbije, Hrvatske i Slovenije. Istraživanje sprovedeno tokom juna 2022. godine obuhvatilo je 604 studenta tri visokoškolske ustanove u Srbiji, Hrvatskoj i Sloveniji. Rezultati do kojih smo došli između ostalog su pokazali i da se odliv mozгова prvenstveno odvija iz ekonomski manje razvijenih zemalja ka onim više razvijenim, dok su bolji životni standard i šanse za boljim obrazovanjem i novim praktičnim znanjima ključni motivi za studente u oblasti zdravstvene nege.

Ključne reči: odliv mozгова, kvalifikovana radna snaga, transfer znanja, stručnjaci zdravstvene nege, tržište rada

1. Introduction

Migration of personnel of different profiles and levels of education, and especially of highly qualified personnel is a natural phenomenon, i.e., a phenomenon that has been occurring for many years but has intensified over the last period (Daugeliene & Marcinkeviciene, 2009). In recent years, the world has faced a drastic and accelerated growth in the number of highly skilled migrants (Lindsay, Findlay, 2001, Van den Broek et al. 2015, King, Lulle, 2016, Berger, 2022), and for this reason, an increasing

number of scientific and professional papers has been written and published, in which the authors point out and emphasize the growing importance of this phenomenon as the basic integral part of the “knowledge society” (Daugeliene, 2007, Kerr et al. 2016). Until recently, this phenomenon has been analysed in the context of human capital circulating out of one’s birth country, consequently leading to a deficit in qualified professionals. However, in recent times this phenomenon has started to attain other connotations. Temporary and sometimes life-long employment in a certain foreign country has become a

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common thing for a large portion of the population, and in this situation, both the birth and the host country have the possibility of using the knowledge and experience of highly specialized experts (Saxenian, 2002).

According to International Organization for Migration (IOM), The Swiss Agency for Development (SDC) & the United Nations Development Program (UNDP), migration, as a term, represents a permanent or temporary change in the place of residence of a population at a certain time interval. It is also called the spatial mobility of the population that includes circular, temporary, occasional, highly diverse and frequent shifts correlating with employment, professional training, and the joining of families or vacations. Internal migration refers to the change of the place of residence within the borders of one country, while external migration involves emigrants that are currently outside of their birth country and returnees from abroad (Bauer et al. 2005; Skeldon, 2021).

The notion of migration entails the notions of immigration and emigration. Immigration occurs when a population settles into a country and is caused by certain factors the immigrating population finds attractive. Emigration occurs when populations move from one country to another and are caused by the other country's attractive factors.

Numerous eminent authors that analyse migrations, especially migrations of highly-qualified professionals, i.e., "brain circulation", are emphasizing that this phenomenon is a vital process for the economic development of one country. Interestingly, many countries today are creating and successfully implementing programs by which they bring back not only domestic experts into the birth country, but also bring in foreign researchers that will help in its further development (Chacko, 2007, Daugeline, 2007). Daugeline has come to some very useful and interesting conclusions concerning this process. He has stated that the brain circulation phenomenon is of great importance for the further development of modern economies based on knowledge and that migrations of highly qualified experts have a very positive effect on their development. The author Daugeliene also views the term brain circulation as "the mobility of highly qualified persons between motherland and foreign countries. This stimulates creation, dissemination, an adaptation of new knowledge" (Daugeliene, Marcinkeviciene, 2009). Many countries that lack their own human capital have developed exactly by attracting foreign experts to their markets. In this way, brain circulation has provided them with long-term economic and social benefits (Daugeline, 2007).

The term *brain circulation* is also referred to as *the human capital flight* and both notions encompass the migration of highly skilled, educated and trained professionals due to some economic, social, political or other reasons. The phenomenon of one country losing its human capital, i.e., educated populations emigrating in search of better opportunities, is called *brain drain*. Brain drain is a diffusion of talented people from home to the host county (Ienciu & Ienciu, 2015). The reverse process, i.e., the

phenomenon of one country receiving educated professionals, thus attaining human capital and potential, is called *brain gain* (Daugeliene, Marcinkeviciene, 2009; Krasulja et al. 2016; Berger, 2022).

The concept of "brain circulation" can today be observed quite differently – it is no longer one-directional in which one country loses and the other gains. Qualified professionals are mobilized in both directions, i.e., between two countries: birth country and host country. In this way, global migrations, characterized by the temporary mobility of qualified professionals, can be observed as the main channel for transferring different types of knowledge. In this process, countries exchange their intellectual resources.

Tung points out the factors that have a strong influence on brain circulation (Tung, 2008; Krasulja et al. 2016): Globalization has made countries all over the world more co-dependent than ever in the history of humankind; Abolition of migration barriers enables the workforce to freely move across international markets (USA, Canada, EU, etc.); The existence of a larger number of people having dual citizenship; The occurrence and strengthening of the 'careers without borders' concept.

Demographic changes with their overall, but primarily impact on economic growth has captured the attention of macroeconomists for decades. This is due to the fact that the relations between population growth and GDP trends are complex and ambiguous in terms of causes and consequences. In economically underdeveloped countries, accelerated population growth is generally seen as a barrier to GDP growth per capita (Despotovic, at al. 2022). If we look at this fact from the aspect of brain drain/circulation, we can assume that the mentioned is a significant influence for young people when they think about leaving.

2. Motives behind the brain circulation (emigration motives)

To this date, brain drain has been a major problem for the development of poorer countries. The problem is still a topical one, so a great number of skilled and highly qualified personnel from poorer countries such as Eastern European countries primarily go to more developed countries for training and work. In a significantly smaller number of cases, skilled and highly qualified personnel return to their home country. There are just a few examples, such as South Korea and Taiwan, which have been exposed to great brain drain in the past and which have succeeded in mitigating this problem with successful policies (Daugeliene, Marcinkeviciene, 2009).

Although the motives behind population circulation are somewhat similar in Eastern Europe, Serbia, Slovenia and Croatia, there are some differences. In this paper, the example of the Republic of Serbia is taken as a starting point for the basic motives behind population circulation. In the study "Migration and Development in Serbia", created as a result of a global project which was realized under the name "Mainstreaming Migration into National

Development Strategies" and sponsored by the Swiss Agency for Development and Cooperation (SDC), the International Organization for Migration (IOM) and the United Nations Development Program (UNDP), when asked about their intention and willingness to leave the Republic of Serbia, to seek a job, and for example going to the European Union (EU), the respondents gave the following answers. According to the research in question, averages of 41.3% of respondents are ready to leave Serbia and move to an EU country seeking a job. Also, according to the research results, out of the total number of respondents, the highest per cent – 82.3% - of the student population in Serbia are ready to migrate to an EU country looking for a job, while 52.7% of highly educated professionals would be ready to circulate, i.e., migrate to an EU country in search of a job.

The research titled "*Youth Emigration Costs in Serbia*" was carried out by the Institute for Development and Innovations and supported by the Westminster Foundation for Democracy. For a long time now, Serbia has been facing serious demographic issues. The research has shown that 78% of young people between 18 and 29 years of age are thinking about leaving Serbia.

If we set our focus exclusively on doctors and healthcare professionals, the situation is even more dramatic and complex. It is more complex due to numerous reasons, but the following two are imposed as the most significant ones: the issue of emigration and the average age of doctors. Namely, according to the previously mentioned global project titled "*Mainstreaming Migration into National Development Strategies*", the average age of doctors in Serbia increases year by year. According to the data of the abovementioned research, 28% of medical specialists are above 55 years of age, and the average age of doctors increases every year. According to the research, the average number of doctors above 55 years of age increases every year. Simultaneously with this trend, the number of emigrants from the labour market also increases (especially doctors and health care professionals), which consequently leads to having less workforce in the birth country (in this case in the Republic of Serbia). Brain drains alongside a significant increase in the average age of the working-age population is an extremely negative trend that is observed in the long run.

3. Prognoses for the brain circulation

When talking about the consequences of the international mobility of the workforce, it is difficult to draw a universal conclusion. If the workforce moves in only one direction, the birth country inevitably faces problems of the reduced young and working-age population. Likewise, when the most promising experts leave their birth country, further economic and technological development of that country will certainly slow down (Verkhohlyad and McLean, 2011).

However, as certain authors point out, migrations to other countries may lead to new workplaces opening up, hence increasing the employment chances of the ones who stay. Consequently, average earnings in the country will

increase. What is positive is that we can suppose that highly educated migrants will send a portion of now high earnings to their birth countries, thus implying the growth of consumption.

It is evident that in the last few decades, the need for trained professionals has been steadily increasing. Professionals from various fields of expertise have become agents of the economic development of both their countries and entire regions. Hence, governments in many countries have long been fighting to attract and retain talented people in their countries. In today's global and extremely complex economy, it is becoming increasingly hard to find the appropriate professionals on the local market, thus many organizations are deciding to look for the necessary experts on the international market where the fight over talent has been happening for years now. (Ewers, 2007).

Certain authors point out that, in this complex process, it is extremely important to acknowledge not only the perspective of the countries and organizations employees are going to but also the rationale behind people's decisions to move away, which has nothing to do with the organizational system and structure. Surely, each individual has their motives for moving to another country (Al Ariss, Ozbilgin, 2010). Likewise, it is necessary to point out that the number of migrants moving to another country to enjoy a better-quality lifestyle is no longer negligible. Developed countries, especially Western European countries, are very popular destinations in this sense. Of course, decisions concerning one's career are entirely individual and depend on the individual in question, but it should be emphasized that it is very important to understand the motives for migration to further explore this topic. There is a category of highly educated individuals moving exclusively because of the lifestyle, better relations between private and business life, etc. Suutari and Taka state that, in their research sample consisting of Finnish migrants from the field of HR, a great number of them moved exactly because they wanted a different lifestyle for themselves (Suutari, Taka, 2004).

The practice has shown that career and professional reasons are characteristic of younger people who are moving to other countries at the beginning of their careers wanting to invest in their further development. Older migrants leave their countries to be closer to their families and improve their lifestyles (Van Dalen, Henkens, 2007). A logical conclusion is that people from the abovementioned two groups are in completely different stages in their careers, hence they will have different ambitions and affinities regarding the investments in their birth country's resources. Very often, before deciding to leave one's country, an individual cannot find a suitable job at which his/her qualifications are valued. This primarily refers to Europe and the serious crisis that began in 2010. Qualified populations from countries such as Greece, Italy, Spain, Portugal, and the UK, but also the ex-Yugoslavian countries, account for high rates in the migration of qualified professionals. On the other hand, the United Arab Emirates which has been the host country for many Europeans has since 2011 been working on the

so-called Emiratisation which has re-directed many foreigners towards their birth countries. Countries such as Qatar and Saudi Arabia have taken a similar initiative as the United Arab Emirates.

Everything so far mentioned has led authors to further explore and pay special attention to motives, tendencies and trends regarding the circulation of highly educated healthcare professionals. According to many research results, there are numerous reasons highly educated people decide to leave their countries. When a country is poor, further degradation of the education system and social health care protection occurs, in which case not only educated people leave but also other segments of the population. Generally speaking, regardless of the atmosphere in one's birth country, an individual can decide to migrate exclusively because of the better earnings they are offered. But, as the majority of authors from this field claim, the strongest motive for migration is achieving a better standard of living, higher earnings or better conditions for investing in personal knowledge and career (Harvey, 2011).

When considering motives which are not primarily of economic character, often happens that qualified professionals leave to have better prospects for further learning and development. The decision to migrate is often related exclusively to having better, more modern technical working conditions which for certain occupations, for example, health care professionals, is of crucial importance. Then we have motives for working in a narrower professional field, having more interesting and creative jobs, etc. What is evident is that highly developed countries can always offer "better and more", so it can be expected that the mobility of the workforce will be directed towards them.

On the other hand, an individual can always decide to go back to his/her birth country. Motives behind this can be numerous, starting from difficulties regarding the assimilation to new cultures, all the way to becoming increasingly lonely or having an "empty" personal and professional life, etc. Persons who find social life more important than professionals are more likely to return to their birth countries (Lee, Kim, 2010).

Another common situation when it comes to returning to one's birth country is the revival of local economic conditions in which case the need to stay in a foreign country automatically shuts down. Likewise, a person can start feeling guilty, morally speaking or patriotism-wise, and wish to return and help his/her country to flourish and make progress. Most often in these situations, the formation of international networks for the exchange of knowledge, experience and new ideas begins (Harvey, 2012).

3.1. The pattern of brain drains and brain circulation in the medical field

The motives behind leaving one's country differ for doctors and nurses. Doctors mostly leave to gain better quality expertise and make progress in their careers, while

nurses leave driven primarily by better wages. Earning capacity differs in the way that doctors have the possibility of earning more money by investing in further qualifications. This is not the case with nurses, so employees in this line of work often seek temporary jobs, and are sometimes even illegally hired.

Family and diaspora play an important role when making decisions about migrating to another country. For example, the main motive behind the migration of nurses from South Africa to the UK was exactly the money which they would, later on, send to their children in their birth country for their further education. There are also migration communities which give great support when a person is deciding to leave the country. For example, a great number of doctors from Ireland have gone to the USA primarily due to the well-developed and active diaspora in that territory.

An extremely important factor when talking about the migration of healthcare professionals is finding a permanent job. Those migrants who find a permanent job most often stay, while the ones who do not find adequate work usually leave their host country and return to their birth country.

Finding jobs via the Internet has also become popular amongst employees in this line of work. For example, 13 hiring agencies in Portugal primarily hire healthcare professionals. Facebook and MySpace are frequently used in Australia as a means for communicating with colleagues working abroad. When it comes to nurses, the offer is ample, but the jobs are most often not of permanent character. There are agencies in the Republic of Serbia that organize job placements for nurses from their home country, assisting them in all segments from language learning to professional examination in EU countries, most commonly Germany.

4. Material and methods

The aim of the explorative research and the presented results was to reveal the opinions of medical students in the Republic of Serbia, Croatia and Slovenia about leaving their birth countries or continuing their education abroad, as well as about the possibilities of returning to their birth countries. The research was carried out in June 2022. with the cooperation of students attending basic academic studies at three higher-education institutions for nurses: Academy of Applied Studies Belgrade, The College of Health science, Republic of Serbia, University North, Nursing Department, Varazdin, Republic of Croatia and Faculty of Health Sciences, Novo Mesto, Republic of Slovenia.

Within the framework of the mentioned research, an unstructured interview was also conducted on the following topic: Problems of nurses with a Bachelor's degree in the Republic of Serbia. An unstructured interview was conducted with a tendency to look at the current problems of nurses with a Bachelor's degree in the Republic of Serbia to create certain suggestions for improving their position. Research hypotheses:

Hypothesis H01: There is a statistically relevant difference between the answers of respondents from the three countries (Serbia, Croatia and Slovenia) regarding their plans to move abroad.

Hypothesis H02: Respondents who are planning to look for a job abroad would primarily do so in Germany.

Hypothesis H03: There is a statistically significant difference between the respondents from the three countries (Serbia, Croatia and Slovenia) regarding their plans to return to their birth country.

Research instruments: To confirm or refute the set hypotheses, i.e., for this research, an electronic questionnaire for students was designed. Students from the three higher-education institutions received an URL link for the questionnaire. The questionnaire consists of 18 questions exploring the following aspects: students' attitudes about continuing their education abroad; the perception of students regarding job possibilities in their birth countries or abroad after graduation; students' opinions about the possibility of finding a job concerning the school/faculty they are attending; students' perceptions about the reasons for continuing their education abroad and reasons behind looking for a job abroad; attitudes about returning to the birth country.

In the framework of the aforementioned research, as has already been emphasized, an unstructured interview was conducted to create certain proposals for the promotion of the position of nurses with a Bachelor's degree in the Republic of Serbia. The proposed measures for the improvement of their position can serve as a basis for further research, but also as a basis for the creation of future proposals and measures that could be applied to the Republic of Slovenia, Croatia, as well as to most Eastern European countries. Proposals for measures to improve

the position of nurses in the Republic of Serbia are presented at the very conclusion of this paper.

Research sample. The research sample is deliberate. The research was carried out on a sample of 604 students. A total of 271 students came from the Medical College of Applied Studies in Belgrade, 216 students from the University North, Nursing Department, Croatia and 117 students came from the Faculty of Health Sciences, Novo Mesto, Slovenia.

Regardless of their number, the distribution of respondents according to sex is almost identical. In Serbia and Croatia, 9% of males attend medical studies and 10% in Slovenia.

Statistical data processing. Data analysis was carried out by using statistical methods and techniques of the IBM SPSS software package. Statistical methods used during the analysis are descriptive statistics, Pearson's chi-squared test and Cramer's test. Descriptive analysis was used to determine the frequency of a certain phenomenon (attitude) depending on what country respondents come from. A comparative overview according to certain attitudes was drafted. Chi-squared test was used as a technique for exploring the relationship between data obtained on categorical (or ordinal) scales. This test questioned if there was a certain statistical significance between a certain attitude and the country a respondent came from, i.e., between an attitude and a certain demographic characteristic of respondents.

4. Results

4.1. Respondents' plans to leave their birth countries to work abroad

Table 1. Questionnaire results regarding the question: Have you looked for a job abroad?

Did you ask for a job abroad?		yes, but I still have not found a job	yes, I found a job abroad	no, but I plan	no, I do not plan	Total
Croatia	Count	11	10	108	87	216
	%	5.1%	4.6%	50.0%	40.3%	100.0%
	% within, did you ask for a job?	50.0%	83.3%	32.3%	36.9%	35.8%
	% of Total	1.8%	1.7%	17.9%	14.4%	35.8%
Slovenia*	Count	2	0*	36	79	117
	% within	1.7%	0.0%	30.8%	67.5%	100.0%
	% within did you ask for a job?	9.1%	0.0%	10.8%	33.5%	19.4%
	% of Total	.3%	0.0%	6.0%	13.1%	19.4%
Serbia*	Count	9	2*	190	70	271
	% within	3.3%	.7%	70.1%	25.8%	100.0%
	% within did you ask for a job?	40.9%	16.7%	56.9%	29.7%	44.9%
	% of Total	1.5%	.3%	31.5%	11.6%	44.9%
Total	Count	22	12	334	236	604
	% within	3.6%	2.0%	55.3%	39.1%	100.0%
	% within did you ask for a job?	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	3.6%	2.0%	55.3%	39.1%	100.0%

* such a small percentage of Serbian and Slovenian respondents who found a job abroad can be interpreted exclusively through the prism of the education system which, almost completely, disables students to work and study, especially abroad.

Source: Author's calculation based on SPSS 21.0

Table 2. Chi-square test and Symmetric Measures of the questionnaire regarding the question: Have you looked for a job abroad?

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	75.626 ^a	6	.000
Likelihood Ratio	75.639	6	.000
N of Valid Cases	604		
Symmetric Measures			
		Value	Approx. Sig.
Nominal by Nominal	Phi	.354	.000
	Cramer's V	.250	.000
N of Valid Cases		604	

^a 3 cells (25.0%) have an expected count of less than 5. The minimum expected count is 2.32.

Source: Author's calculation based on SPSS 21.0

Table 3. Attitudes of the respondents about the countries they would most gladly go to.

Responses*	Macroeconomic indicators**					
	Countries	N	%	GDP per capita US\$	10-year average annual GDP growth %	Population millions
Germany	180	33.5	48,264.0	1.8	82.9	3.4
Austria	87	16.2	51,509.0	1.4	8.9	4.8
Switzerland	59	11	82,950.3	1.7	8.5	3.1
Ireland	46	8.6	76,098.6	5.6	4.9	5.7
Norway	37	6.9	81,694.6	1.4	5.3	3.9
Some other country	128	23.8	-	-	-	-
TOTAL	537	100	-	-	-	-

*Source: Authors. ** Source: World Economic Forum, (2019), The Global Competitiveness Report 2019.

Table 4. Questionnaire results regarding the question: If you left the country, would you come back?

Returning to the birth country		never leave	yes	no	not sure	Total
Croatia	Count	0	90	34	92	216
	% within question	0.0%	41.7%	15.7%	42.6%	100.0%
	% within returning to Serbia	0.0%	37.8%	27.0%	40.7%	35.8%
	% of Total	0.0%	14.9%	5.6%	15.2%	35.8%
Slovenia	Count	2	69	14	32	117
	% within question	1.7%	59.0%	12.0%	27.4%	100.0%
	% within returning to Serbia	14.3%	29.0%	11.1%	14.2%	19.4%
	% of Total	.3%	11.4%	2.3%	5.3%	19.4%
Serbia	Count	12	79	78	102	271
	% within question	4.4%	29.2%	28.8%	37.6%	100.0%
	% within returning to Serbia	85.7%	33.2%	61.9%	45.1%	44.9%
	% of Total	2.0%	13.1%	12.9%	16.9%	44.9%
Total	Count	14	238	126	226	604
	% within question	2.3%	39.4%	20.9%	37.4%	100.0%
	% within returning to Serbia	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	2.3%	39.4%	20.9%	37.4%	100.0%

Source: Author's calculation based on SPSS 21.0

Table 5. Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	49.304 ^a	6	.000
Likelihood Ratio	52.880	6	.000
N of Valid Cases	604		
Symmetric Measures			
		Value	Approx. Sig.
Nominal by Nominal	Phi	.286	.000
	Cramer's V	.202	.000
N of Valid Cases		604	

^a 3 cells (25.0%) have an expected count of less than 5. The minimum expected count is 2.32.

Source: Author's calculation based on SPSS 21.0

4.2. The most significant problems of nurses in the Republic of Serbia

Based on the analysis of the respondents' answers collected through the unstructured interview, the most significant problems of nurses with a Bachelor's degree in the Republic of Serbia were identified. The most significant problems of nurses in the Republic of Serbia are listed by the level of significance of the respondents' answers (ordinal scale) and refer to:

- Low pay which is the main cause of the poor economic position of health workers;
- The unresolved legal position of medical colleges in the healthcare system. This is because nurses with a Bachelor's degree are treated as nurses with a secondary education degree;
- The problem of further education, specialization and refinement for conducting various jobs (is largely caused by the previous problem);
- Reducing the workload of patients and the amount of work that nurses do. Nurses in the Republic of Serbia also perform jobs that are in other countries done by paramedics;
- Improving the protection and social position of medical workers in society. To verbally and physically insult nurses in the workplace is not uncommon.

5. Discussion

Based on the analysis of the responses collected within the conducted research, the following results were obtained and they confirm the initially set hypotheses.

Hypothesis H01: There is a statistically significant difference between the answers of respondents from the three countries (the Republic of Serbia, Croatia and Slovenia) regarding their plans to move abroad. Based on the obtained responses, we can conclude that 74,2% of respondents from the Republic of Serbia looked for or planned to look for a job abroad; 59,7% in Croatia and 32,5% in Slovenia (Table 1). On average, the highest per cent of respondents, i.e. 55.3%, were planning to look for a job abroad, while on the other hand, the per cent of those who had already found one is, on average, the lowest (2%). 39.1% of respondents were not planning to look for a job abroad, but we should bear in mind that on this average only 25.8% of respondents are from Serbia and 67.5% from Slovenia. There is a statistically significant difference of medium impact amongst the respondents from the three countries regarding whether they sought employment abroad or not, hence hypothesis H01 has been confirmed.

Hypothesis H02: Respondents who were planning to look for a job abroad would most gladly do so in Germany (Table 3). To an open-ended question – “If you have looked for or planned to look for a job abroad, what country would you most gladly opt for” – 537 respondents gave their answers. Only the first respondents' choices were taken into consideration and then “a list” of five countries most frequently opted for was made.

Interestingly, respondents from all three countries opted for Germany as their first choice, but Ireland was exclusively the choice of the respondents from the Republic of Croatia in a very high per cent. Every second respondent opted for Ireland. Based on the highest number of students who opted for Germany as the most promising country for seeking a job and migrating, the second hypothesis (H02) has been confirmed. Germany is the largest market with ever-increasing economic growth. The German economy has problems regarding the lack of a workforce, which can be proven by a low unemployment rate. Germany is trying to solve the problem of the lack of workforce by having an immigration policy concerning the import of the workforce of various educational profiles. Based on calls made to foreign citizens regarding the available workplaces, the medical profession is on the list of the most wanted occupations. Hence the impression Germany is the country in which you can easily find a job even though it does not have the highest GDP per capita.

Hypothesis H03: There is a statistically significant difference between the respondents from the three countries (Serbia, Croatia and Slovenia) about their plans to leave the country. The majority of Slovenians would go back to their birth country and this fact can be interpreted in various ways and could be a subject of further research. In regards to a percentage, Serbians would not go back if compared with Croatians and Slovenians (Table 4). There is a statistically significant difference of weak impact amongst the respondents from the three countries regarding their return to the birth country if finding a job abroad, hence hypothesis H03 has been confirmed.

5. Conclusion

We can conclude there are two streams in the medical profession literature out of which one supports an opinion that the migrations of qualified professionals to other countries are a serious problem and the other states that the entire migration-related phenomenon has been completely blown out of proportion (Saxenian, 2006). Generally speaking, the debate on whether the process of brain circulation really suppresses the process of brain drain or not still goes on, and the outcome is yet to be seen as time goes by.

It is quite evident that one of the most significant consequences of brain circulation is the exchange of ideas and experiences on a global level. Having the situation in which international professional networks are now being formed, educated migrants can help their own countries by strengthening cooperation with other countries and in that way open and expand the local market. In this way, cooperation between countries can be significantly encouraged. Even when returning to one's birth country, experts can help by applying the acquired knowledge locally and in the most efficient ways.

The research has shown there are differences in the attitudes among the respondents of the Republic of Croatia, Slovenia and Serbia regarding their plans to move abroad and continue their studies. Based on the results, we can also conclude that 74.2% of respondents from the

Republic of Serbia sought or planned to seek work abroad, while the number for Croatia is 59.7% and 32.5% for Slovenia. As the most wanted country to move to, the majority of respondents stated Germany.

The flow of information from developed countries to undeveloped and less developed countries through acquaintances and contacts is very important. It helps others leave their birth countries, but it also provides the ones who stay with guidelines about how to do business, study, etc.

From everything mentioned here, we can conclude that these three countries do not have the same tendencies when it comes to the phenomenon of brain circulation. Namely, the highest number of respondents who would gladly return to their birth countries after graduating or working are from Slovenia, 59%, then we have respondents from the Republic of Croatia, 41.7% and in the end respondents from Serbia, 29.2%. Bearing in mind the general socio-economic environment, as well as the already mentioned fact that the Republic of Slovenia and Croatia are already EU member states and that the Republic of Serbia still has a long way to go until becoming an EU member state, the results have been expected. For now, nurses from the Republic of Serbia are only interested in “single” tickets, which imposes a conclusion that we still cannot speak with certainty about brain circulation, only about brain drain.

In support of the above-mentioned, it should be emphasized that the health system in the Republic of Serbia must undergo structural changes in terms of sustainable financing and organization of the provision of health services. This requires organizational and legal changes governing this area. Solutions that have been in force in developed EU countries for a long time should be implemented in the Republic of Serbia as well. The results obtained through an unstructured interview conducted as an integral part of the research whose general conclusions are presented in this paper, further highlight the problem, but also provide concrete proposals for the advancement of the position of nurses with a Bachelor's degree in the Republic of Serbia. Suggestions for improving the position and working conditions of nurses with a university degree in the Republic of Serbia, based on the respondents' answers in an unstructured interview are:

- Increasing the salaries of healthcare personnel and paying overtime;
- Legal regulation of the position of nurses with Bachelor's degrees in the healthcare and education system of Serbia;
- Introduction of subsidized loans for the purchase of apartments for medical workers;
- Opening of institutional possibilities for further education and training in the country and abroad;
- Introduction of a catalogue (systematization) of posts and pay grades by the line ministry;
- Reconciling staffing plans for the engagement of the number of nurses with the factual state of the population covered by a particular medical facility. This would employ an adequate number of medical

workers who could provide the necessary service without overloading medical workers.

The example of the Republic of Serbia is maybe good to concisely show us the primary issue surrounding the brain drain phenomenon, but also the potential directions for corrective measures that would reduce the excessive outflow of professionals from less developed countries. It can also serve as a representative example for conducting further research in this field. Namely, the number of graduate nurses in the Republic of Serbia is quite high and there is also a significant number of medical specialists waiting for work, hence it is less likely to expect undergraduates to get hired. Likewise, based on the results of the conducted research, we can draw a conclusion that a high number of respondents from the Republic of Serbia do not work while studying – which is a negative indicator pointing out that the education system in the Republic of Serbia is designed in a way that does not encourage working while studying. Also, numerous research results have shown that, ultimately, the incentives for creating a larger number of workplaces and better working conditions in all fields including the medical, as well as a timely inclusion of young people and students in work and in the process of advancing their professional careers, would reduce their need and interest in seeking better future outside of their birth country.

High unemployment rate, poor standard of living and health care system are the main triggers for leaving one's birth country as many research, including ours, have proven right. The harmonization of the education system, from secondary education to higher education, with the needs of the labour market, would enable more adequate employment of young people concerning their education, which would contribute to their integration in a socio-economic sense. It would significantly reduce their thinking, plans and decisions about leaving the country, at least when it comes to the ex-Yugoslavian countries. The abovementioned measures would motivate many who have left the country to permanently come back.

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