

CAUSES OF MIGRATION AND WORKING CONDITIONS ABROAD AMONG PHYIOTHERAPISTS

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ABSTRACT. Introduction: The migration of health professionals severely affects the current number of physicians and professionals in a country. **Aim:** The aim of our work was to investigate the reasons for the departure of physiotherapists already working abroad, to learn the working conditions abroad, and to explore the conditions for returning home. **Method:** Our data were obtained by a self-edited, online questionnaire survey. The number of items in our sample was 112 (N = 112) physiotherapists working abroad. Our research was conducted between November 2018 and February 2019. **Results:** Results of the most influential factors of migration were as follows: 62.5% (70 people) had a lack of financial reward, 55.4% (62 people) had a sense of uncertainty about the future, 49.1% (55 people) did not trust the Hungarian health care organization. The monthly salary of professionals working abroad varied between 1001-2000 Euros in 38.4% (43 people), between 2001 and 3000 in 38.4% (43 people) and was over 3000 Euros in 23.2% (26 people). 76.8% (86 people) didn't take a second job because they didn't need it. Factors influencing return were the following: 1) in 69.6% (78 people) “more favorite financial conditions”, 2) in 51.8% (58 people) “better working conditions”, 3) in 42.9% (48 people) “a better organized health care system. **Conclusion:** Physiotherapists working abroad have left mainly due to a better quality of life, a more predictable vision and more favorite financial conditions, and a change in these conditions would encourage them to return home the most.

Keywords: *migration, physiotherapist, salary, return home*

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Introduction

The migration of health professionals has become a global phenomenon, raising more and more health policy issues. The lack of specialists has a decisive impact on the operation and quality of the health care system in a given country, as well as on the health status of the population (Eke, Girasek, & Szócska, 2009). In many countries of our continent, the number one agenda item for professional policy activities is to acquire and retain a well-trained workforce to meet high-level, complex health needs. To this end, a joint action plan has been set up to monitor the recruitment and retention of professionals in the various European countries to make the labor market more predictable at a later stage (European Commission, 2011, 2012).

However, the international migration of health professionals is an advantage for many countries, as it helps to provide adequate care, to replace the number of staff, but at the same time it can provide opportunities for professional development, exchange of experience and the spread of various procedures and techniques. Within the European Union, especially in the last decade, as a result of the enlargement of the EU, the flow of health workers has intensified, due to the principle of free movement of persons and services. As a matter of fact, working abroad is usually decided by citizens of lower-income countries (Ognyanova, Maier, Wismar, Girasek, & Busse, 2012; Glinos, 2014).

Due to the intensification of migration processes, the most severe concern is the lack of human resources in the health care system. Trends and triggers in the emigration of health professionals are an area studied not only in Europe but also studied worldwide (Castro-Palaganas, et al., 2017; Suciu, Popescu, Ciumageanu, & Buzoianu, 2017; Galbany-Estragués & Nelson, 2016; Duvivier, Burch, & Boulet, 2017; Labonté, et al., 2015; Gavin & Bruce, 2017).

Unfortunately, the migration of health professionals is also severely affecting Hungary. Based on the data of the Licensing and Administrative Office of Health and the State of Health Care Center for Human Resources Directorate General for Development about 500 doctors ask for an official certificate of foreign employment for the first time per year, which means that approximately 300-350 people actually leave the country. Among health professionals, the same request was made by 568 people in 2013, 548 people in 2014, 567 people in 2015, 486 people in 2016, 407 people in 2017, and 292 people in 2018 (National Hospital Directorate General, 2020).

The lack of financial and professional esteem can be found in the background of medical and professional migration, but the decisive criterion is also the different health care and economic status of the countries (Pónusz, et

al., 2016; Szekanecz, Tóth, Hamar, & Lánctzi, 2017; Sipos, et al., 2018; Somogyi, 2014; Gyórfy & Girasek, 2014; Gyórfy & Széll, 2018; Molics, et al., 2015). Unfortunately, the decrease of social migration among Hungarian doctors cannot be expected in the future (Girasek, Eke, & Szócska, 2018; Girasek, Molnár, Eke, & Szócska, 2011).

The multi-stage salary development program implemented in health care can be favorable for keeping workers in the Hungarian health care system in order to reduce migration, due to financial appreciation. Based on the salary development plan, the development of the gross monthly salary of the starting F-category employee on the basis of the salary and wage scale of the health care professionals is as follows: 256,338 HUF (732 EUR) from 25 July 2019, 289,662 HUF (828 EUR), from 1 January 2020, 2020 from 337,456 HUF (964 EUR) from November 1 2020, 408,332 HUF (1,166 EUR) from January 1 2022. (1 EUR=350 HUF) (Government Decree, 2019)

The main focus of our research was to examine the reasons for the migration of physiotherapist, to get to know the working conditions abroad, and to explore the conditions for their returning home.

Data and Methods

In our questionnaire survey, we used a simple, non-random sampling method. We sent the questionnaires to colleagues working in the target countries primarily by e-mail as well as through social media. The target group was physiotherapists graduated in Hungary but practiced their profession in a foreign country. Our online questionnaire was completed by a total of 116 people, of which we were able to use 112 evaluable sheets (N = 112).

We conducted the research between November 2018 and February 2019. The data collection was operated by self- edited questionnaires. The questionnaire consisted of 29 questions based on the former Hungarian literature of migration. The groups of questions were as follows: socio-demographic data, education, language proficiency data, working conditions, the satisfaction with it, the migration causes, and a possible return.

In order to get an accurate picture of the factors for colleagues leaving the country we compiled a list of 15 aspects. From this list, the person filling in the items could choose the statements characteristic of her in any number. After selection, we asked for a ranking of the factors. Examining the possibilities of returning home, we similarly asked the respondent to mark the characteristic of her from a list of seven factors, and to rank them in case of several answers.

Results

A total of 112 people completed the questionnaire. Regarding the territorial distribution of our sample, it can be stated that most people, 33.9%, completed our questionnaire in France (n = 38) and 32.1% of them in Austria (n = 36). We received answers, 10.7% from Germany (n = 12), 9.8% from Switzerland (n = 11) and 8% from colleagues in England (n = 9), 2-2 persons from Italy and the United Arab Emirates (1.8%), and from 1-1 persons from Sweden and Belgium (0.9%). (Table 1)

Table 1. Territorial distribution of respondents to the questionnaire survey

Workplace	n	%
France	38	33.9%
Austria	36	32.1%
Germany	12	10.7%
Switzerland	11	9.8%
England	9	8%
Italy	2	1.8%
United Arab Emirates	2	1.8%
Sweden	1	0.9%
Belgium	1	0.9%
Altogether:	112	100%

42.9% of the physiotherapists participating in our research left Hungary 5-10 years ago to work abroad (n = 48). Respondents in the lowest number were those who left the country more than 10 years ago: 5.4%. 23.2% of them did not work at all at home prior to leave Hungary (n = 26) and 48.2% of them spent at least 5 years at home (n = 54). At the time of leaving, 23.2% of them imagined their future abroad forever (n = 26), and 24.1% planned for at least 5-10 years (n = 27). (Table 2)

Table 2. Circumstances and reasons for leaving at the time of departure abroad

How long did you leave Hungary?	n	%
0-24 months	24	21.4%
25-59 months	34	30.4%
5-10 years	48	42.9%
more than 10 years	6	5.4%

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Did you work in Hungary before leaving?		
Yes, 0-24 months	27	24.1%
Yes, 25-59 months	27	24.1%
Yes, 5-10 years	22	19.6%
Yes, more than 10 years	10	8.9%
No	26	23.2%
How much time did you plan to work abroad on leaving?		
0-24 months	20	17.9%
25-59 months	19	17.0%
5-10 years	27	24.1%
More than 10 years	20	17.9%
forever	26	23.2%
Due to what factors did you decide to leave?		
Workload level	20	17.9%
The lack of financial esteem	70	62.5%
Workplace conditions	41	36.6%
The state of the Hungarian healthcare system	55	49.1%
Uncertainty about the future	62	55.4%
I have not worked in my home country	26	23.2%

38.4% of physiotherapists working abroad earned between 1001-2000 Euros per month (n = 43), also 38.4% of them earned between 2001 and 3000 Euros, and 23.2% reported salaries above 3000 Euros (n = 26). 41.1% received a fringe benefit. 76.8% did not take a second job because they did not need it (n = 86), only 7.1% (n = 8) took an extra job for financial reasons. 73.2% of them considered their situation to be average in the country where they lived (n = 82), 20.5% of respondents considered it to be above the average existential level (n = 23).

53.6% of physiotherapists leaving Hungary would be satisfied with a net monthly salary of between HUF 350,001 (1,000 EUR) and HUF 500,000 (1,429 EUR) at home (n = 60), however, 27.7% would be satisfied with a net monthly salary of between HUF 250,001 (714 EUR) and HUF 350,000 (1,000 EUR) (n = 31).

47.3% of them considered realistic the amount to be between 250,001 (714 EUR) and 350,000 (1,000 EUR) HUF (n = 53), but also 39.3% of those, who put the value of real net monthly salary between 150,000 (429 EUR) and 250,000 (714 EUR) in Hungary at the time of completing the questionnaire (n = 44). (Table 3)

Table 3. Income expectations and realized income

Monthly net salary (EUR)	n	%
1001-2000	43	38.4%
Between 2001-3000	43	38.4%
Over 3000	26	23.2%
Do you receive a fringe benefit?		
Yes	46	41.1%
No	66	58.9%
Do you take a second job?		
Yes because I need it	8	7.1%
Yes, but not for financial reasons	12	10.7%
Well, I do not need it	86	76.8%
No, not allowed	6	5.4%
How do you see the financial situation of yours in the country where you live?		
Below average	7	6.3%
Average	82	73.2%
Over average	23	20.5%
Net monthly salary, you would be satisfied with at home (HUF)		
250.001-350.000 (714 – 1,000 EUR)	31	27.7%
350.001-500.000 (1000 – 1,429 EUR)	60	53.6%
Over 500,000 (1,429 EUR)	21	18.8%
Monthly net salary that you think is realistic at home (HUF)		
150,000-250,000 (429-714 EUR)	44	39.3%
205.001-350.000 (714-1,000 EUR)	53	47.3%
350.001-500.000 (1,000 – 1,429 EUR)	13	11.6%
Over 500,000 (1,429 EUR)	2	1.8%

For 77.7%, the factor that played a prominent role in leaving is the “better quality of life, more predictable vision”, which was ranked 1st. 77.7% also cited the statement “more favorable financial conditions” as the reason for leaving, which was ranked 2nd among our respondents. The proportion of physiotherapist who left Hungary due to the “hope of better working conditions” was 57.1%, and this statement was ranked 3rd overall in the sample. “Professional challenge,

development” was the reason for leaving for 44.6%, while “lack of professional esteem” was the reason for leaving for 37.5%. These two factors occupied the 4th place in the ranking of our respondents. “Desire for adventure” drove 48.2% of our sample, “more favorable development of the future of family aspects and family members” was the driving force for 25.9%, these statements came in 5th place in the ranking. The proportion of respondents was not negligible who had migrated abroad for “language learning”, since this accounts for 43.8%, and 34.8% of the respondents chose “seemingly predictable economic system of the country of destination”. An attractive factor for 31.3% was the “better organized health care in the destination country”, and 17.5% left our country due to “failure to find a job at home.” The four statements just listed all ranked 6th. 33.3% of our respondents were affected by “lack of social esteem” and 18.8% of them were affected by “bad experiences gained while working / studying at home”, these two statements were ranked 7th. 5.4% of the research participants were attracted abroad by the “opportunity for scientific work”, which is the 8th statement in the ranking. Finally, 2.7% cited “burnout” as the reason, ranking last 9th. (Table 4)

Table 4. Factors involved in leaving and their ranking

Factors of leaving	n	%	ranking
Better quality of life, more predictable vision	87	77.7%	1.
More favorable financial conditions	87	77.7%	2.
Hope for better working conditions	64	57.1%	3.
Professional challenge, development	50	44.6%	4.
Lack of professional esteem	42	37.5%	4.
Desire for adventure	54	48.2%	5.
Family aspects, more favorable development of the future of family members	29	25.9%	5.
Language learning	49	43.8%	6.
Better organized health care in the destination country	35	31.3%	6.
Unsuccessful job search at home	19	17.5%	6.
The more predictable economic system of the destination country	39	34.8%	6.
Lack of social esteem	37	33%	7.
Bad experiences during work / study at home	21	18.8%	7.
Possibility of scientific work	6	5.4%	8.
Burnout	3	2.7%	9.

The “more favorable financial conditions” was ranked in the highest proportion, accounted for 69.6%, that would affect repatriation. The statement was also ranked 1st. 51.8% of the respondents would return home in the case of “better working conditions”, ranking 2nd. 42.9% would be motivated to return home by a “better organized health care system”, ranking 3rd. 42.9% would return home in the case of a “more predictable economic system”, and 41.1% would want a “higher professional esteem”, these factors ranked 4th. In the case of 25% of the respondents, the “increase in social esteem” would be an influencing factor, which was 5th in the ranking. For 1.8% of the respondents, the “opportunity for scientific work” would be important, which ranked last in 6th place. Among the eight factors, the “no such factor” category was also an option, marked by 26.8% of colleagues working abroad. (Table 5)

Table 5. Distribution and ranking of factors influencing repatriation

Factors influencing repatriation	n	%	ranking
better financial conditions	78	69.6%	1.
better working conditions	58	51.8%	2.
A better organized health care system	48	42.9%	3.
higher professional esteem	46	41.1%	4.
A more predictable economic system	47	42%	4.
Increase in social esteem	28	25%	5.
Opportunity for scientific work	2	1.8%	6.
No such a factor	30	26.8%	-

23.2% imagined their future abroad when they left (n = 26) and 24.1% planned for at least 5-10 years (n = 27). At the moment of completing the questionnaire, this number has become even higher, as 46.2% (n = 52) of the respondents planned to live abroad forever, and 20.5% (n = 23) of them definitely planned to live abroad for more than 10 years.

Discussion

The worldwide phenomenon of migration of health professionals associated with our country can be recognized and treated as a fact. Learning the motivation for migration, we can state the fact that working abroad will continue to be an existing process in the coming years. Among physiotherapists

working in Hungary, the intention to work abroad is present in 43.7% (Pónusz et al., 2016). 33.6% of medical students prepare to go abroad immediately after graduating from the medical faculties in Hungary (Gyórfy & Széll, 2018).

Concerning those who had already worked abroad, there was also a difference between the number of years they spent working at home before working abroad, as well as the time they planned to work abroad. Almost half (48.2%) of the physiotherapist working outside Hungary had less than 5 years of practice at home, while 23.2% did not work in the profession at home before. A significant part of doctors (91.1%), were employed in Hungary for the first time in their profession, however, after an average of 10.8 years of work, they were still able to give up their jobs at home and leave the country (Szekanecz, Tóth, Hamar, & Láncki, 2017). The physiotherapist specialists plan to work abroad for 5-10 years or forever, while almost half of the doctors do all this in a shorter time interval, up to 5 years (Szekanecz, Tóth, Hamar, & Láncki, 2017), as now medical students consider leaving only in 2-5 years (Gyórfy & Széll, 2018).

In general, it can be stated that with the start of working abroad, the idea of staying there permanently or for a longer period of time is strengthened in the professionals in contrast with their initial plans. 46.4% of physiotherapists who have completed the questionnaire plan to live permanently in the given country, while in the case of doctors this would increase from 13.58% to 38.27% (Szekanecz, Tóth, Hamar, & Láncki, 2017).

The difference between the salaries of the professionals at home and abroad was conceivable, but its extent was striking. When completing the questionnaire, the newly graduated physiotherapists received 327,350 HUF (935 EUR) gross in category F based on the already modified salary scale of health professionals valid from 1 November 2018. 38.4% of their colleagues working abroad earned between HUF 700,000 (2,000 EUR) and HUF 1,050,000 (3,000 EUR) net per month, but 23.2% of them earned even more.

Regarding the additional work undertaken by physiotherapist working abroad and at home, it can be stated that the vast majority of those working abroad no longer took a second job (76.8%), primarily because they did not need it, while colleagues working at home (51, 63%) had a second job (Pónusz, et al., 2016).

However, employees' perception of their own financial situation is similarly high among those working at home or abroad. The majority of those working abroad considered their financial situation to be average in the country where they currently lived (73.2%) and 84.6% of them felt the same at home (Pónusz, et al., 2016). In addition to the differences in the living conditions between countries, it can be assumed that the consideration of the salaries of second jobs undertaken due to low pay also played a role in assessing the financial situation at this level.

Among the reasons for leaving, the desire for financial security can also be established on the basis of our sample and the results of other works. The largest number of participants in our study cited the statement “better quality of life, more favorable vision” and “more favorable financial conditions” as the reason for leaving, while physicians included “higher salary”, “lack of career model/sense of security/professional vision” (Szekanecz, Tóth, Hamar, & Láncki, 2017). Medical students considered working conditions, pay and living conditions to be the most significant factors influencing employment abroad (Gyórfy & Széll, 2018). 95.74% of physiotherapists- working at home, but with migration thoughts, considered the more favorable financial esteem to be the main reason for emigration (Pónusz, et al., 2016).

More favorable financial conditions (69.6%), better working conditions (51.8%) could have the greatest effect on the return of physiotherapists, and a more secure financial esteem and improvement of the organizational culture would significantly support the return of doctors. Among other factors contributing to employment at home after working abroad, the improvement of working conditions and pay is emphasized elsewhere. (Gyórfy & Széll, 2018) The recognition and encouragement of human resources is a key issue in the financing of the Hungarian health care system (Boncz & Sebestyén, 2006; Kriszbacher , Oláh, Bódis, & Boncz, 2007; Greenberg, Mohamed Ibrahim, & Boncz, 2014; Horváth, és mtsai., 2014; (Endrei, Zemlényi, Molics, Ágoston, & Boncz, 2014; Péter, et al., 2017; Varga, et al., 2019; Eisingerné Balassa, Csákvári, & Ágoston, 2019), appropriate benefit implementation of the system as soon as possible (Molics, et al., 2013; Boncz, et al., 2015; Molics, et al., 2013).

The foreign employment of doctors abroad has been a long-standing problem in Hungary. Foreign employment of the health science professionals, physiotherapists, nurses, ambulance officers, dieticians, radiographers, etc., however, is a relatively recent phenomenon. Retaining health professionals and modernizing their careers at home is a significant health policy challenge (Boncz, Nagy, Sebestyén, & Kőrösi, 2004; Bethlehem, Boncz, Kriszbacher, Oláh, & Bódis, 2007; Gulácsi, és mtsai., 2009; Bethlehem, et al., 2014; Boncz, Vajda, Ágoston, Endrei, & Sebestyén, 2014; Molics, et al., 2015; Sebestyén, Mester, & Vokó, 2015).

Our results correlate well with the previous literature and confirm the demand, often expressed in Hungary, that further salary increases and working conditions should be improved in the case of physiotherapists in order to maintain the health workforce.

Statement

The publication has not previously been published in another journal and has not been submitted elsewhere.

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REFERENCES

- Bethlehem, J., Boncz, I., Kriszbacher, I., Oláh, A., & Bódis, J. (2007). The export of nurses from Europe to the United States. *Am J Public Health, 97*: 2119.
- Bethlehem, J., Horvath, A., Jeges, S., Gondos, Z., Németh, T., Kukla, A., & Oláh, A. (2014). How healthy are ambulance personnel in Central Europe? *Eval Health Prof., 37*: 394-406.
- Boncz, I., & Sebestyén, A. (2006). Financial deficits in the health services of the UK and Hungary. *Lancet, 368*: 917-918.
- Boncz, I., Evetovits, T., Dózsa, C., Sebestyén, A., Gulácsi, L., Ágoston, I., Thomas, G. (2015). The Hungarian care managing organization pilot program. *Value Health Reg Issues, 7*: 27-33.
- Boncz, I., Vajda, R., Ágoston, I., Endrei, D., & Sebestyén, A. (2014). Changes in the health status of the population of Central and Eastern European countries between 1990 and 2010. *Eur J Health Econ, 15*: 137-141.
- Castro-Palaganas, E., Spitzer, DL, Kabamalan, MM, Sanchez, M., Caricativo, R., Runnels, V., Bourgeault, I. (2017). An examination of the causes, consequences, and policy responses to the migration of highly trained health personnel from the Philippines: the high cost of living / leaving - a mixed method study. *Hum Resour Health, 15*:25.
- Duvivier, RJ, Burch, VC, & Boulet, J. (2017). A comparison of physician emigration from Africa to the United States of America between 2005 and 2015. *Hum Resour Health, 15*:41.

- Eisingerné Balassa, B., Csákvári, T., & Ágoston, I. (2019). Development of health insurance drug expenditures in Hungary. [Development of health insurance drug expenditures in Hungary.] [Hungarian]. *Orv Hetil*, 160 (Suppl 1): 49-54.
- Eke, E., Girasek, E., & Szócska, M. (2009). Migration among the Hungarian medical doctors. [Migration among Hungarian doctors.] [Hungarian]. *Statistical Review*. 7-8, 795-827.
- European Commission. (2012). *Commission staff working document on an action plan for the EU health workforce. SWD (2012) 93 final*. Strasbourg: European Commission.
- European Commission. (2011). *Modernizing the professional qualifications directive. COM (2011) 367 final*. Brussels: Green Paper.
- Galbany-Estragués, P., & Nelson, S. (2016). Migration of Spanish nurses 2009-2014. Underemployment and surplus production of Spanish nurses and mobility among Spanish registered nurses: a case study. *Int J Nurs Stud*, 63: 112-123.
- Gavin, G., & Bruce, R. (2017). Is there a financial incentive to immigration? Examination of the health worker salary gap between India and populat destiantion countries. *Hum Resour Health*, 15: 74.
- Girasek, E., Eke, E., & Szócska, M. (2018). Analysis of a survey on young doctors' willingness to work in rural Hungary. *Hum Resour Health*, 8:13.
- Girasek, E., Molnár, R., Eke, E., & Szócska, M. (2011). The medical career choice motivations - results from a Hungarian study. *Central European Journal of Medicine*, 6: 502-509.
- Glinos, IA (2014). Going beyond numbers: a typology of health professional mobility inside and outside the European Union. *Policy and Society*, 33: 25-37.
- Greenberg, D., Mohamed Ibrahim, M. b., & Boncz, I. (2014). What are the challenges in onducting cost-of-illness studies? *Value Health Reg Issues*, 4: 115-116.
- Gyórfy, Z., & Girasek, E. (2014). Workload, work satisfaction and burnout among Hungarian female residents. Results of representative, online survey. [Workload, job satisfaction and burnout among Hungarian residents - a representative online survey]. *Orv Hetil*, 155: 1831-1840.
- Gyórfy, Z., & Széll, Z. (2018). Willingness to work abroad among Hungarian medical students. [Intentions of Hungarian medical students to work abroad.] [Hungarian]. *Orv Hetil*, 159: 31-37.
- Government Decree, 1 (2019). 139/2019. (June 14) Government Decree amending certain government decrees related to wage measures for the retention and development of human resources for health professionals and health visitors, and cases of tuberculosis. *Magyar Közlöny*, 101: 3474-3492.
- Labonté, R., Sanders, D., Mathole, T., Crush, J., Chikanda, A., Dambisya, Y., Bourgeault, I. (2015). Health worker migration from South Africa: causes, conquences and policy responses. *Hum Resour Health*, 13:92.
- Molics, B., Boncz, I., Leidecker, E., Horváth, C., Sebestyén, A., Kránicz, J., Oláh, A. (2015). Health insurance aspects of physiotherapeutic care of neurology disorders in outpatient care. [Health Insurance Aspects of Physiotherapy for Neurological Diseases in Outpatient Specialized Care.] [Hungarian]. *Neurologist Szle.*, 68: 399-408.

- Molics, B., Hanzel, A., Nyárády, J., Sebestyén, A., Boncz, I., Sélleyné Gyuró, M., & Kráncz, J. (2013). Utilization indicators of physiotherapy in musculoskeletal and connective tissue disorders for outpatient care. [Utilization rates of physiotherapy outpatient care in the treatment of musculoskeletal disorders.] [Hungarian]. *Hungarian Traumatology, Orthopedics, Hand Surgery, Plastic Surgery*, 56: 305-315.
- Molics, B., Kráncz, J., Schmidt, B., Sebestyén, A., Nyárády, J., & Boncz, I. (2013). Utilization of physiotherapy services in the case of trauma disorders of the lower extremity in the outpatient care. [Utilization indicators of physiotherapy activities in outpatient specialist care for lower limb traumatological diseases] [Hung. *Orv Hetil*], 154: 985-92.
- Ognyanova, D., Maier, C.B., Wismar, M., Girasek, E., & Busse, R. (2012). Mobility of health professionals pre and post 2004 and 2007 EU enlargements: evidence from the EU project PROMeTHEUS. *Health Policy*, 108: 122-132.
- National Hospital Directorate General. (20/07/2020). *State Health Care Center - Directorate-General for Human Resources Development*. Source: www.enkh.hu: <https://www.enkh.hu/hmr/index.php/migracios-statisztikak/eves-statisztikak>.
- Péter, I., Jagicza, A., Ajtay, Z., Boncz, I., Kiss, I., Szendi, K., Németh, B. (2017). Balneotherapy in psoriasis rehabilitation. *In Vivo*, 31: 1163-1168.
- Pónusz, R., Kovács, D., Raposa, LB, Hock, M., Decsi, T., Kráncz, J., & Endrei, D. (2016). Motivations for foreign employment and carrier change among Hungarian physiotherapists. [Motives to work abroad and to leave the profession among Hungarian physiotherapists.] [Hungarian]. *Orv Hetil*, 157: 342-349.
- Sebestyén, A., Mester, S., & Vokó, Z. (2015). Wintertime surgery increases the risk of conversion to hip arthroplasty after internal fixation of femoral neck fracture. *Osteoporos Int*, 26: 1109-17.
- Sipos, D., Vandulek, C., Petóné Csima, M., Dear, A., Pandúr, A., Boncz, I., Kovács, Á. (2018). The migration and attrition behavior among Hungarian radiographers. *Glob J Health Sci*, 10: 1.
- Somogyi, N. (2014). Research of the motivations to work abroad among young people in London. [Examining the motivations for working abroad among young people in London.] [English]. *E-CONOM.*, 4: 1-11.
- Suciu Ş.M., Popescu, C.A., Ciumageanu, M.D., & Buzoianu, A.D. (2017). Physician migration at its roots: a study on the emigration preferences and plans among medical students in Romania. *Hum Resour Health*, 15: 6.
- Szekanecz, Z., Tóth, Z., Hamar, A., & Láncki, L. (2017). Why would doctors from Debrecen go abroad? [Why do doctors in Debrecen go abroad?] [Hungarian]. *Orv Hetil*, 158: 1458-1468.
- Varga, V., Boncz, I., Sebestyén, A., Endrei, D., Ágoston, I., Péter, I., & Molics, B. (2019). Utilization indicators of spa services in Hungary. [Indicators of the use of spa services in Hungary.] [Hungarian]. *Orv Hetil*, 60 (Suppl 1): 22-28.