

Analysis of the readiness of medical professionals from Bulgaria, Croatia and Slovenia on the need for continuing online training on matters relating to drug policy

B. Brankov¹ and A. Zlatareva^{2*}

¹Faculty of Pharmacy, Varna Medical University, Bulgaria.

²Faculty of Public Health, Varna Medical University, Bulgaria.

Accepted 15 December, 2020

ABSTRACT

The purpose of the study is to examine the opinion of the medical community on the need for further training on matters relating to drug policy (as a dynamic and rapidly changing area of healthcare policy bearing on the work of a number of healthcare specialists) and the attitudes to web-based forms of further training. The study was conducted among healthcare professionals (healthcare professionals means graduates in medicine and/or pharmacy – physicians, dentists, pharmacists and healthcare professionals and managers etc. who practice their occupation applying the set of regulatory standards governing drug policy) from three Balkan countries – Bulgaria, Slovenia and Croatia – who have completed a dedicated survey. Participation in the survey was voluntary and the polling was conducted on the basis of the ‘snowballing’ technique for survey dissemination and recruitment of respondents. The statistical processing of collected data relied on a correlational descriptive and regression analysis. The results reveal that respondents are aware of the need and are willing to pursue possibilities for further training on matters relating to drug policy. The correlational analysis has revealed interesting further data. A statistically significant negative correlation has been established between knowledge assessment and the method of updating and upgrading knowledge on matters relating to drug policy. The data suggests that according to the respondents self-learning and attending courses led by trainers who are subject-matter experts increases the evaluation of knowledge in the area of drug policy ($\rho = 0.631$, $p = 0.002$). Furthermore, the greater frequency of additional training events to improve current levels of knowledge is also a factor that increases self-assessment of being up to date on the latest developments in this area ($\rho = 0.577$, $p = 0.006$). There is a need for further training in the area of drug policy and the preferred form of this type of training are the online and physical training events by guest trainers conducted by medical schools. In order to ensure that training conforms to a high-quality standard, a test should be taken at the end and a certificate attesting to the training should be issued as a quality assurance guarantee.

Keywords: Postgraduate training/drug policy, medical specialists.

*Corresponding author. E-mail: azlatareva@gmail.com, Albena.Zlatareva@mu-varna.bg.

INTRODUCTION

The training of medical specialists has a number of specificities, first and foremost among these its high degree of autonomy and the need for continuous and further training through independent study and acquiring new knowledge in the respective branch of the medical

science in which the individual specialises (Bennetts et al., 2012; Bennett et al., 2000). The continually increasing requirements for the safety of healthcare services require healthcare professionals for continually improve their knowledge in both narrow specialist fields of the medical

science but also in other areas of medicine, pharmacology and pharmacy, including sectoral regulations governing drug policy – a dynamic and rapidly developing area of knowledge and expertise. A functioning drug policy must satisfy interests that are sometimes at odds—those of patients who are at the heart of healthcare policy, institutions and the pharmaceutical industry (Abraham and Lewis, 2000; Christiansen, 1997; Council of the European Communities, 1965) This requires that motivation for further (continuing) education be nurtured as early as the stage of university education of future medical and healthcare professionals. It also requires in-depth study of the drivers for life-long learning.

A number of medical universities in Bulgaria and in other countries are working to develop digital platforms for the further training of medical and healthcare graduates in order to improve the conditions for their career development and enable them to improve their qualifications. The results of a significant number of studies of issues relating to post-graduate and further training and education of healthcare specialists indicate that they are well aware of the multiple opportunities provided by further training and of the need to continually upgrade and improve their knowledge and skills throughout their life in order to have a successful career. The forms of training also continually evolve and develop, which helps overcome some of the problems of the past physicians, dentists, pharmacists and healthcare specialists faces, such as the lack of a possibility to time a longer period off work and the lack of free time to dedicate to self-directed learning or prepare for training requiring physical presence, among others (Dyulgerova et al., 2019; Brankov and Zlatareva, 2020). Self-directed learning (SDL) as a method for continuing medical education (CME) is the most effective approach to improving the effectiveness of medical professionals. According to Eggelmeyer (2010) in *life-long learning* is an imperative requirement for all in the 21st century. Life-long learning is furthermore a well understood need and both the individual and society have an interest in it.

The topic is particularly relevant today, when the problems and restrictions stemming from the COVID-19 pandemic have triggered rapid restructuring of a number of areas of public and political life around the world in order to ensure that healthcare systems function as efficiently as possible to protect human life and health through social distancing — the only viable solution until a vaccine or a specific therapy targeting this new and poorly understood infectious disease is found. The widespread isolation and strict quarantines imposed in a number of European countries has brought forth the pressing problem of distance learning and teleworking (working away from the office; from home). Distance learning was introduced for students and schoolchildren during the total lockdown in a number of countries, including Bulgaria. All this has unambiguously

demonstrated the need for educational systems to be adaptive and flexible so that they can be quickly restructured in order to distance learning forms of training and education.

Self-directed learning is the basic framework for continuing medical education (Laal, 2012; Laal et al., 2014).

Continuing higher education in medicine and pharmacy (CHE) is the last and often poorly understood stage in the education of medical professionals. The understanding of contemporary theories of the education of medical doctors and pharmacists and of CHE characteristics and effective interventions will facilitate CHE providers and healthcare professionals in training to plan productive CHE activities and improve training. These would be more useful if modelled on the basis of a sound theoretical grounding, serving individual training needs and preferences and focusing on the learning component of education. Many widely practised CHE models are not effective because they are not based on the above principles. Data indicates that the careful planning and assessment of CHE will improve the key measure of physician effectiveness and healthcare outcomes (Amin, 2000). The programmes aiming to improve the knowledge and skills of medical specialists and their tutors, such as workshops, conferences at local, national and international level, congresses and national and international medical societies and associations, are among the most popular methods for improving the knowledge of medical specialists and implementing the concept of continuous further professional training. At the current stage of development of digital technologies, online training is becoming an increasingly popular form of further training (Bryce et al., 2000; Council of the European Union, 2002; European Parliament resolution, 2016;

https://bphu.bg/upload/files/Pravila%20za%20prodyljavasho%20obuchenie_2018.pdf; SDMS Continuing Medical Education, 2019; Kerfoot and Baker, 2012; Howell Round, 2013).

Drug policy is a set of regulatory standards, measures and derivative actions that cover three separate areas that often involve interests that are at odds: public health; the healthcare system in EU Member States, and the pharmaceutical industry, including pharmaceutical companies.

Overall, drug policy implementation in a given EU Member State is also a function of political factors that have a bearing on pharmaceutical sector regulation at the same level while taking into account local economic conditions (Abraham and Lewis, 2000; Christiansen, 1997; Council of the European Communities, 1965). Drug policy also traces the route of a drug from a concept to the development, production, the issuance of a marketing authorisation, pricing, reimbursement and use by patients in the healthcare system. All considerations described above mean that drug policy is an essential and

dynamically developing area of medical and pharmaceutical knowledge and is therefore highly relevant, enabling graduates in medicine and pharmacy to maintain adequate knowledge of issues in this area (Abraham and Lewis, 2000; Christiansen, 1997; Council of the European Communities, 1965).

On the other hand, government policies designed to support citizens during transition stages in their lives is one of the main concerns in the context of a rapidly changing knowledge-based economy. These recommendations are based on the conclusions set out in the 2004 OECD report *Career guidance and public policy: bridging the gap*, which identifies as top priority the *'the transition to a borderline approach aiming to promote the acquisition of career-development skills and skills enabling effective career solutions to be taken and implemented in practice. All this requires an approach that is embedded in the syllabus and includes experience-based learning'* (OECD, 2004). An emphasis is placed on career management skills and the competency-based approach. The process of life-long learning requires an individual to acquire certain competencies. The 2006 Council Recommendation on **Key Competencies for Lifelong Learning** defines the knowledge, skills and attitudes which young people should develop by the end of their basic education and training and emphasizes that adults should be given the opportunity to develop and improve their skills during the process of lifelong learning. The recommendation identifies 8 competencies necessary for personal realisation and further learning and professional development. Most of these enable an individual to manage learning and their professional life: skills to **seek, gather and process information through mother tongue communication** (1st competence) and **digital competency** (4th competency). The fifth competency – **learning how to learn** – indirectly applies to career management skills: **'learning how to learn requires an individual to know and understand which learning strategies they prefer to use and know the strength and weaknesses of their skills and qualifications, as well as have the skills to seek opportunities for training and guidance'**.

It is widely accepted that digital innovation has transformed the work environment and occupational profiles, influencing the training and work of individuals. But what is their influence on the way people manage their careers, train and change jobs? Owing to an array of innovative instruments, greater data availability and artificial intelligence, the new approaches to support for career development and self-directed learning have transformed lifelong learning. Online job portals provide a wealth of information about professions and available opportunities for training in combination with personal skills and aptitude tests, as well as personal portfolios. Many of them include matching drivers, linking character traits and skills to available vacancies and opportunities

for people for create their CVs and apply for jobs. Other portals offer novel functionalities such as online chats, which are particularly popular with young people. Even games are becoming a part of online career guidance, helping users better identify their existing skills and potential gaps. CEDEFOP is studying the latest practices from European countries in this area and analysing the promises and challenges emerging in this area (CEDEFOP, nd).

Purpose

The purpose of the study is to examine the opinion of the healthcare specialists community (individuals who have graduated from medical university – physicians, dentists, pharmacists, healthcare professionals and managers health economists) on the need for further training on matters relating to drug policy as this is one of the most dynamic and rapidly changing areas of health policy bearing on the activity of a number of healthcare professions (including healthcare managers, hospital directors, representatives of the pharmaceutical industry and many others) and the attitudes to web-based forms of further training. The idea of the study is to establish the attitude of respondents to the possibility of joining web-based forms of continuous training, specifically in the area of drug policy (as an element of healthcare policy) because it offers great opportunities and is a new area of knowledge that is well-suited to the online environment.

In order to achieve the aims of the study, we defined the following tasks: (1) exploring the viewpoints of healthcare professionals from Croatia, Slovenia and Bulgaria on the need for further knowledge and training on drug policy with a view to ensuring better career development and improve professional qualifications; (2) level of access and familiarity of healthcare professionals in Bulgaria, Croatia and Slovenia with available online specialist programmes for continuous training in connection with their professional qualifications.

MATERIALS AND METHODS

The study was conducted among medical professionals from three Balkan countries – Bulgaria, Slovenia and Croatia who have similar parameters in terms of development of continuous education. All three countries are working to improve the quality of higher education and its correspondence to the needs of the labour market (EU Commission, nd). This gave us the idea to study the situation in terms of post-graduate training, and more specifically the opportunities available to healthcare professionals in the area of drug policy as an essential element of the healthcare policy of a country, selecting Slovenia, which is singled out as a leader in digital training in the Balkans, and Bulgaria and Croatia with systems that are not yet fully developed.

Our idea for a larger scale study was partially obstructed by the COVID-19 pandemic, which is the reason why we initially had to rely on a representative sample and conduct the study in its entirety at a later stage. Participation in the survey was voluntary and the

polling was conducted on the basis of the 'snowballing' technique for survey dissemination and recruitment of respondents. The surveys were sent by e-mail. A total of 21 surveys were completed by different healthcare professionals. Respondents from Bulgaria and Croatia had an equal share of respondents (5 respondents from each country, 23.8%) for each group and Slovenian medical professionals had a share of 52.4% of respondents (11 respondents). The respondents had a varied profile in terms of occupation and place of work because our aim was to cover different types of healthcare professionals – healthcare managers, physicians, pharmacists, dentists, healthcare specialists, etc. Their distribution, depending on their workplace/occupation, was as follows: 13.3% representatives of pharmaceutical companies and hospitals as the main group of professionals using and applying their knowledge of drug policy in their daily work, 13.4% were private organisations – private hospitals and 13.3% medicinal product providers and entities engaged in the control of supply of medicinal products, 6.7% were quality managers and commercial directors; and the largest group with a share of 20% were medical representatives whose knowledge in the area of drug policy, for example the latest developments in the area of drug reimbursement, etc. should be continually updated and upgraded in view of the nature of their work. The data collected via the surveys sent were processed statistically.

No ethical approval was required for the study because the respondents who completed the questionnaire were healthcare specialists who participated voluntarily in the study, which did not include any patients.

RESULTS

The developed survey contains two groups of questions, with **Group 1-10** aiming to establish how healthcare professionals rate their knowledge of drug policy and its relevance; what their attitudes to further training in this area are; and how the institutions they work for facilitate post-graduate training for their specialists and their career development. **The second group of questions (11-22)** aims to establish what forms of additional training in the area of drug policy are available; whether healthcare specialists are familiar with any web-based forms of additional training and what their level of trust in them is.

The answers of the respondents have demonstrated that most of them rate their knowledge in the area of drug policy as *good* (42.9%). It is interesting to note that more Croatians (14.3%) than Slovenians (4.8%) rate their knowledge as *very good* as compared to none of the Bulgarian respondents (0%). Most Bulgarians and Slovenians rate their knowledge as *good* (19%) against 19% of Croatians, which are unable to give an answer. The difference between respondents show a statistical significance after χ^2 verification ($\chi^2 = 12.57$, $p = 0.05$).

As regards the frequency of encountering situations relevant to drug policy issues, the respondents who stated that they have encountered such problems at least once have the largest relative share (28.6%). Regarding the difficulties encountered in their daily work stemming from issues relating to drug policy, data shows that Bulgarian respondents encounter the most difficulties (14.3%) as compared to Slovenians (9.5%) and

Croatians (4.8%). However, these differences are not statistically significant.

Data further shows that respondents most often update their knowledge by taking part in workshops with various specialists or by attending lectures delivered by guest speakers (28.6%), self-learning or a combination of the three suggested answers (76.4%). The sum is greater than 100% because respondents have given more than 1 answer. The χ^2 analysis has revealed significant differences between the respondents ($\chi^2 = 26.72$, $p = 0.008$). For example, while Bulgarian respondents rely on workshops and talks by guest speakers, Croatians prefer self-directed study. Slovenians upgrade their knowledge using a variety of methods, with most respondents (23.8%) stating that they rely on a combination of the suggested options.

Overall, respondents state that the career development policy at their respective places of work requires them to be familiar with the latest trends in healthcare policy (and in particular drug policy) (47.6%) and that external speakers and experts are routinely invited as part of the effort to upgrade their qualifications (4.8%).

The key specialists at the institutions for which the respondents work are physicians, pharmacists, economists, public healthcare professionals and others. Their average percentage distribution in the three countries is set out in Table 1.

The answers to questions aiming to establish the access to opportunities to improve qualifications have revealed that most respondents (63.2%) believe that there are regulatory requirements for applicants to participate in continuous post-graduate training and that applicant selection is based on competencies, education or specialty (15%). Another 20% of respondents believe that experience and competence are the leading factors in the selection of applicants for continuous training in the area of drug policy. Respondents from Croatia state that no selection is necessary and that everyone should be able to apply (20%) and that other selection criteria apply (other than those mentioned in the survey) (15%) whereas Bulgarian respondents (15%) and their Slovenian counterparts (20%) believe that the leading factors for selection should be a combination of experience, education and competencies.

It was of interest to establish the extent to which the training events taking place at the place of work of respondents and designed to raise their educational and qualification degrees are values in a workplace setting. The descriptive analysis also established that the respondents from the three countries agree that it is not necessary for the trainers engaged in further training to have a PhD or DCs (60%) The remaining 40% of respondents stated that this was necessary, with the highest number of respondents who shared the need for trainers to have a MSc and DSc from Bulgaria and Croatia. This is probably due to the fact that only approximately 10% of healthcare specialists in the workplaces of the respondents have a PhD or DSc degree or academic rank (research fellow, associate professor or professor) (Tables 2 and 3).

Table 1. Occupied professionals.

	Bulgaria (%)	Slovenia (%)	Croatia (%)
Physicians	3.9 ± 1.8	10 ± 1	55 ± 15
Pharmacists	26 ± 12	20 ± 10	5 ± 4
Healthcare managers/ Healthcare economists	17 ± 4.2	20 ± 10	10 ± 5
Other	39 ± 4	60 ± 10	53 ± 20

Table 2. Percentage of colleagues with a doctoral engaged in training.

$\chi^2 = 6.66, p = 0.125$		Country			Total
		Bulgaria	Slovenia	Croatia	
Up to 10 %	Number	5	5	5	15
	%	25.0	25.0	25.0	75.0
11 % to 30 %	Number	0	0	4	4
	%	0.0	0.0	20.0	20.0
31 % to 50 %	Number	0	0	1	1
	%	0.0	0.0	5.0	5.0
Total	Number	5	5	10	20
	%	25.0	25.0	50.0	100.0

Table 3. Percentage of colleagues with an academic rank engaged in training.

$\chi^2 = 6.37, p = 0.138$		Country			Total
		Bulgaria	Slovenia	Croatia	
Up to 10 %	Number	4	5	7	16
	%	20.0	25.0	35.0	80.0
11 % to 30 %	Number	0	0	2	2
	%	0.0	0.0	10.0	10.0
31 % to 50 %	Number	0	0	1	1
	%	0.0	0.0	5.0	5.0
45.00	Number	1	0	0	1
	%	5.0	0.0	0.0	5.0
Total	Number	5	5	10	20
	%	25.0	25.0	50.0	100.0

It is noteworthy that some institutions in Bulgaria and Croatia have a requirement for the recruitment of representatives of the academic community (research fellows, associate professors and professors) among staff but the percentage differences between the countries are insignificant ($\chi^2 = 2.35, p = 0.308$) as a guarantee for the quality of healthcare activities offered.

It should be added that 60% of respondents had

master's degree, 30% had a PhD degree, one (5%) had a DSc degree, and one (5%) had a bachelor's degree.

The bulk of respondents from the three countries are graduates in medicine (52.4%) or pharmacy (14.3%), and approximately 10% are civil servants in the area of healthcare, including medical representatives of pharmaceutical companies in their role of respondents in the survey had medical or pharmaceutical education.

The way in which the respondents of the different organisations enrolled in further training courses in the different countries differed, and the differences were found to be statistically significant ($\chi^2 = 27.8$, $p = 0.027$). For example, in Bulgaria the major determining factor for participation was experience from participation in previous training events (9.5%) and random decision (4.8%) while in Slovenia none of the respondents mentioned participation in previous training events as a driver for choosing to enroll in subsequent training. However, respondents specify 'other' as a possible answer without explaining the mechanism underlying selection and participation in training events (23.8%). In Croatia, more than 33% of respondents stated that they joined the training because they wished to. There is no statistically significant difference in the opinions of the respondents from the different countries on the length of further training. More than 88% of all respondents believe that it should be strictly specific, depending on the nature of the training.

According to the respondents, each training should end with a written (38.9%) or an oral (16.7%) test and certificates attesting to the completion of the training should be issued (Table 4).

The correlational analysis (based on Spearman's method) to detect links between the different category variables showed a statistically significant negative correlation between knowledge assessment and the

method of refreshing and gaining new knowledge in the drug policy area.

The analysis conducted on the basis of Spearman's method shows that the assessment of the relevance of knowledge of matters relating to drug policy is determined by the degree to which the respondent encounters issues from this domain in their daily. The positive strong correlation for example was established depending on the frequency of encountering matters relating to drug policy in practice, with the assessment improving with a greater frequency of cases encountered in this domain in daily work ($\rho = 0.695$, $p = 0.0001$).

The result shows that self-learning and training events with guest speakers/trainers who are experts on drug policy increase the assessment of knowledge in this area ($\rho = 0.631$, $p = 0.002$). Furthermore, the greater frequency of additional training events conducted with a view to improving qualifications is also a factor that improves the self-assessment of the relevance of knowledge in this area ($\rho = 0.577$, $p = 0.006$) (Table 5).

The results have shown a significant statistical difference between the countries as regards the availability of post-graduate studies at the institutions where the respondents work ($\chi^2 = 18.07$, $p = 0.021$). While Bulgarians and Slovenians (19%) attend such courses at least a year, their Croatian colleagues (14.3%) state that no such courses are available or that they do not have information about such courses (23.8%).

Table 4. When conducting web-based training on matters relating to drug policy, how should the trainees be evaluated in order to guarantee the quality of the training?

		Country			Total
		Bulgaria	Slovenia	Croatia	
$\chi^2 = 20.12$, $p = 0.65$					
The course should end with an online test of the participants and the issuance of a certificate on this basis	Number	4	0	3	7
	%	22.2	0.0	16.7	38.9
Each participant should receive a certificate on the basis of a written/examination test	Number	0	1	1	2
	%	0.0	5.6	5.6	11.1
With a test conducted by the training organisation and the issuance of certificates to the respondents	Number	1	0	1	2
	%	5.6	0.0	5.6	11.1
the respondents in the training course should receive certificates after a successful project assignment / examination thesis defended before an expert board	Number	0	0	3	3
	%	0.0	0.0	16.7	16.7
Other	Number	0	1	0	1
	%	0.0	5.6	0.0	5.6
Combination of the answers	Number	0	3	0	3
	%	0.0	16.7	0.0	16.7
Total	Number	5	5	8	18
	%	27.8	27.8	44.4	100.0

Table 5. Correlational analysis of the associations related to the assessment of relevance of knowledge of drug policy issues.

		How do you assess the relevance of your knowledge of drug policy issues	How often do you encounter situations involving drug policy issues in your daily work?	How do you refresh and gain new knowledge of drug policy issues at your institution?	How often does your institution conduct additional training n drug policy issues in order to improve staff qualification?
How do you assess the relevance of your knowledge of drug policy issues	rho	1.000	.695**	-.631**	.577**
	p	.	.000	.002	.006
How often do you encounter situations involving drug policy issues in your daily work:	rho	.695**	1.000	-.377	.490*
	p	.000	.	.092	.024
How do you refresh and gain new knowledge of drug policy issues at your institution?	rho	-.631**	-.377	1.000	-.679**
	p	.002	.092	.	.001
How often does your institution conduct additional training n drug policy issues in order to improve staff qualification?	rho	.577**	.490*	-.679**	1.000
	p	.006	.024	.001	.

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Using correlational analysis, we tested the extent to which the selection for enrolment in further training programmes depend on the level of awareness of the existence of such courses and programmes. The analysis has shown that the systematic selection of staff to participate in further training programmes is strongly dependent on the awareness of respondents of available possibilities for web-based training ($\rho = -0.591$, $p = 0.005$). Furthermore, the awareness of respondents of available possibilities for training in the area of drug policy is strongly linked to and dependent on the type of institutions offering such training (for example, universities, government organisations, private organisations ($\rho = -0.484$, $p = 0.026$) (Table 6).

Regression analysis was used in order to determine the extent to which the frequency of the additional training events on matters relating to drug policy is influenced by factors, such as the ways to update and gain new knowledge in the drug policy area, staff policy and the types of institutions organising and offering postgraduate further training. The regression analysis has demonstrated a high level of predictability ($R = 0.699$, $p = 0.009$), confirming that the abovementioned independent variables have a strong influence on the frequency of conducted training events. More specifically, the ways to update and gain new knowledge

($\beta = -0.532$, $p < 0.011$) and the type of institutions offering postgraduate training ($\beta = -0.521$, $p < 0.009$) are the strongest predictors (Table 7).

DISCUSSION

The conducted survey shows that the respondents in all three countries support the idea and are willing to participate in postgraduate training, particularly if the training is conducted by guest speakers at their place of work, i.e. it does not require them to take leave from work, or if the training is via a web-based platform. A relatively high proportion of respondents believe that there is a need for further training in the drug policy area because they encounter issues from this domain in their daily work and do not always feel adequately prepared and well-versed in the issues concerned. It is interesting to note that the majority of respondents (60%) do not believe that trainers must have an academically title or hold a PhD or DSc degree, with 40% of respondents stating that this is necessary. The respondents in the survey agree unanimously that the quality of further training (regardless of its form) requires validation by an examination on the basis of which certificates are issued.

Studies conducted by other researchers (DMS

Table 6. Correlational analysis of the selection of respondents to be included in further training programmes.

		How does your institution determine which members of staff will be included in a further training programme?	Are you aware of any forms of remote web-based training in the area of drug policy that are available in your country?	Which institution in your country offers and conducts postgraduate and further training courses on drug policy most frequently?
How does your institution determine which members of staff will be included in a further training programme?	rho	1.000	-.591**	.090
	p	.	.005	.697
Are you aware of any forms of remote web-based training in the area of drug policy that are available in your country?	rho	-.591**	1.000	-.484*
	p	.005	.	.026
Which institution in your country offers and conducts postgraduate and further training courses on drug policy most frequently?	rho	.090	-.484*	1.000
	p	.697	.026	.

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 7. Regression analysis: ways to update knowledge and the type of institutions offering postgraduate education are the strongest predictors.

	Non-standardised coefficients		Standardised coefficients	t	p
	B	Standard error	Beta		
Constant	3.302	.428		7.707	.000
Ways of updating and gaining new knowledge	-.018	.006	-.532	-2.870	.011
Human resources policy	.005	.069	.012	.066	.948
Type of educational institution	-.017	.006	-.521	-2.957	.009

a. Dependent variable: frequency of the conducted training.

Continuing Medical Education, 2019; Kerfoot and Baker, 2012; Howell Round, 2013; Beynat et al., 2011; Austin, 2013; Castellanos-Ortega et al., 2014) conclusively corroborate the trends in further postgraduate training we have established and also highlight the positive attitudes of specialists in different areas of medicine to web-based training. Adequate access to various forms of continuous training is available in all three countries, including web-based training. In order to ensure better understanding of the importance and development of online forms of training, further studies need to be conducted in this area with more respondents so as to enable an objective analysis of digital forms of training and education and their place in university education. The pandemic has further emphasized the need for digital competencies and a broader range of skills enabling work in the digital environment, not only for young learners, tutors and practising trainers, but for all people. Maintenance

services are also essential for the provision of information and guidance about available possibilities for improvement of the qualifications and the retraining of adult learners who need access to the relevant possibilities and possibly moral support to overcome the crisis triggered by the COVID-19 pandemic. At the centre of what a number of career guidance experts describe as the **big leap to online training** and providing career development guidance, we find digital technologies, their development and the role of information and communication technologies in lifelong career guidance. The topics include current and future modes of delivery; barriers in access to online support and multi-channel provision for all; training and career training/guidance as an element of school syllabi; labour market information (LMI); need for wide and universal improvement of qualifications and training (for practitioners, learners, beneficiaries, carers, job seekers and employees, etc.);

information strategies, especially in the case of vulnerable groups; information and guidance on the use of digital technologies; IT security, personal data protection and ethical issues (CEDEFOP, nd-2).

Conclusions

There is a need for motivation for further (continuous training) to be nurtured and promoted throughout the university education of medical professionals. This requires in-depth study of the factors stimulating the process of lifelong learning. A number of medical universities in Bulgaria and in other countries are working on the development of digital platforms for training of graduate medical professionals in order to ensure better opportunities for their career development and for the improvement of their qualifications. Drug policy is a dynamic and rapidly changing area and is an essential component of the healthcare policy of each country. Therefore, adequate knowledge of this area is essential for healthcare professionals and must be updated and upgraded on a regular basis through different forms of further training and education.

The conducted study has revealed a need for improvement of the forms of postgraduate training on drug policy available among health professionals. In view of this, it is recommended that medical schools and the institutions concerned in the career development of staff envisage an option for web-based postgraduate training and include such courses in their programmes, including for medical representatives/ representatives of pharmaceutical companies. In order to ensure the quality of this type of training, the courses should end with taking an exam in the form of an individual course assignment or an online test on the basis of which certificates attesting to the completion of the training course are issued to the successful respondents.

Conflict of interest

The authors declare that the survey has not been financed by and has been conducted with the voluntary participation of the respondents, i.e. no conflict of interest arises in connection with the manner in which the study was conducted.

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Citation: Brankov B, Zlatareva A, 2021. Analysis of the readiness of medical professionals from Bulgaria, Croatia and Slovenia on the need for continuing online training on matters relating to drug policy. Int Res J Med Med Sci, 9(1): 9-18.
