

CONTINUING PROFESSIONAL DEVELOPMENT FOR PHARMACISTS: PREFERENCES, INTERESTS AND EXPERIENCE

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One of the models of lifelong learning, Continuing Professional Development is a targeted, systematic, and tailored form of professional development. This paper aims to show the pharmacists' preferences, interests and experiences about models and areas of education.

Moreover, a cross-sectional observational study was conducted through an online survey posted on the website of the Serbian Chamber of Pharmacy. Besides, a questionnaire was created with 11 questions for the purpose of the research. The survey was completed by 565 pharmacists, and 93.4% were employed by a community pharmacy. More than half of the respondents (56.7%) felt they needed to develop their professional competences. In addition, for most pharmacists surveyed, direct interaction with the lecturer was significant. Over two-thirds of the respondents showed the highest affinity for the "case report", labelling it as "the most interesting", followed by workshops and lectures. The most interesting were the education via the Internet (57.7%), where the digital choices available on the Internet with the possibility of automatic podcast download were the first choice among half of the respondents. When asked about participation in continuing education (CE) the previous year, pharmacists responded that 95% had participated in CE, of which nearly half were at more than 5 CE.

According to the results of this research, the development of information technologies, the availability and diversity of educational content and models, the choice and active participation in education, were recognized by pharmacists in Serbia as an appropriate approach in professional development.

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Introduction

Dynamic and constant changes in the areas of science, society, healthcare, and patient needs have created challenges for healthcare professionals, including pharmacists. One of the most significant challenges is adapting professional development to public needs, legislative requirements, and institutional systems. Educating healthcare personnel and the provision of continuing professional development (CPD) in the form of lifelong learning has become a focal point for interested healthcare personnel,

healthcare systems, but also for the highest professional authorities and organizations, on a global scale (1, 2). Over the last decade, the pharmaceutical profession has changed aspects of the activity. From production, procurement, and issuance, distribution of medicines, counseling, disease prevention, and providing support to patients about self-medication as the dominant areas of competency. The primary role and, therefore, the training of pharmacists has shifted over the last 30 years in most European countries from the traditional "product focus" to the so-called "patient focus" approach. Economic factors, the availability of medicine to a broader population, uniformity, and quality preservation are some of the primary reasons as to why the production has shifted to large, most often semi-automatized systems operating within the pharmaceutical industry.

Additionally, pharmacists profiling and training has moved to the role of "medicinal use" professionals and therapy counseling. However, 21st century trends and rapid changes in all societal segments, including the pharmaceutical profession, have imposed and resulted in new as well as in bringing back into previous focus roles held by pharmacists. Personalized medicine, specific medi-

nal forms, the development of drugs used to treat rare diseases and deficiencies of certain medications for particular categories of patients will increase the need for small-scale production in compounding laboratories (3). This demand will require specific production know-how, skills, and quality control.

On the other hand, scientific developments in the fields of molecular genetics or biotechnology have led to significant discoveries such as genome mapping, gene editing, and a better understanding of the molecular mechanics of numerous diseases (4). Additionally, discoveries in fundamental science have enabled the development of new biological drugs, the development of gene therapy, and new drugs in cancer immune-therapy (CAR T-cell therapy) (5). We are living in the 4th industrial revolution, where the digital revolution has transformed and continues to change the way we live (6). Technologies developed in other areas have made their way into pharmacy and medicine. Smartphones, various apps, and wearables used to monitor health, virtual and augmented reality, information platforms, chatbots, virtual assistants, and many other examples of artificial intelligence applied in the healthcare system have had a significant impact on the future position and role of the pharmacist. New approaches to therapy, such as digital pills (7) or digital therapeutics (specially designed and tested therapy software) (8), have already gained FDA approval.

All this serves to expand the scope of information, skill, and know-how required by pharmacists so they can respond to the primary criterion of the profession - the pharmacist as an expert on medicinal drugs. Besides basic knowledge, there are three core domains in which the pharmacist must demonstrate expertise: knowledge of medication, human anatomy, and social behavior. It is making evident that a whole range of additional competences, skills, and "smart specialization" are needed. A commitment to lifelong learning is the foundation of successful professional development but also the survival of the pharmaceutical profession.

A new paradigm in the education of pharmacists – CPD

Extensive theoretical knowledge available to pharmacists, but with little opportunity to apply said experience in practice, attitudes that pharmacists are academic experts who lack self-confidence in decision-making when they have to use their expertise to the treatment of patients, and/or the opinion they experience difficulties in the practice of providing pharmaceutical healthcare (9), have all lead to a need for a stronger paradigm shift in terms of the pharmacist training. The traditional approach to educate these professionals is not an option. It has resulted in undesirable outcomes and the development of a new educational paradigm: training founded on competences and learning outcomes that reflect on the changes in behavior in the provision of medical/pharmaceutical care (10). The need for current educational programs, which in-

clude a behavioral psychology doctrine, has generated a need for new competencies (11), and the instruments for their development, such as a competency framework (12). Pharmacists are offered a new educational model that highlights an active approach, self-reflection, and the management of their professional development. Continuing Professional Development (CPD) is one such lifelong learning model. This model is an objective-based, systemic, and adaptable form of professional development where the participation of the healthcare professional may be regarded as a level of moral and professional accountability, and is expressed through expert assessment, ethics, attitudes, and values (13, 14). The CPD approach requires consideration of preferences and professional interests, activities chosen in response to identified needs, reflection and self-reflection, self-orientation, and the ability to adapt to change, i.e., the consistent improvement of competences (15).

Current features of continuing education for pharmacists in Serbia

Experiences gained in other countries in the assessment of the practices of pharmacists (16-18) have served to lay the groundwork in Serbia for a systemic and formal competency evaluation. A National Competency Framework was adopted in 2014 by an umbrella organization, the Pharmaceutical Chamber of Serbia (19), and is one of the first tools prepared to evaluate knowledge through applying specific indicators, i.e., competences. The research that followed indicates this instrument type offers the opportunity for assessment and the development and competency of pharmacists, as well as an incentive toward the professional development of pharmacists (20). The first assessment of pharmacists' competency in Serbia was conducted in 2011 aided by an adapted and validated Framework of overall levels (21), while the following assessment was completed throughout 2012/13 through a tailored and proved globally applied instrument (Global Competency Framework), where a discrepancy was noted between existing and required competencies, and a need to introduce more efficient learning models based on the practical application of knowledge and skills (22). The terms under which a license may be obtained and renewed in Serbia are defined by law (23-25) and for the most part, comply with other countries in the region. However, practice shows there is a need to adapt educational programs with pharmacists' requirements and preferences, and to provide support for CPD, i.e., to find solutions to potential barriers in the lifelong learning of pharmacists in practical terms.

This paper shall include pharmacists' preferences and attitudes of the members of the Pharmaceutical Chamber of Serbia, educational models, and factors which may have a positive or negative impact on education, i.e., professional development (field of education, models and instructional modalities, elements of time, Internet access). Based on their assessments, the surveyed pharmacists will

determine which competences they need to develop, areas they wish to know more about and to assess the importance of direct interaction with lecturers. The study includes information on the respondents' approach to continued education over the previous years.

Materials and methods

A cross-sectional observational study was conducted by researching online surveys available on the Pharmaceutical Chamber of Serbia's (FKS) website. For the needs of the research, learning models were created as were the factors which impact motivation for continuing education. The survey included questions relating to professional activities and the workplace, fields of professional interest, educational models and modalities, educational duration and days in the week best used for training, and the number of educational activities conducted over the previous year. By applying the Likert scale from 1 to 5 (1 - of least interest, 5 - of most interest), the surveyed pharmacists demonstrated their level of interest in various forms of training. The survey was anonymous and conducted voluntarily. The study included 565 participants, registered pharmacists - B.Sc. Pharm/M.Sc.Pharm.

Program package SPSS 20.0 was used for data entry and processing. For the needs of analysis and the description of the structure of samples per relevant variables, displays of frequency and percentages were used to show a representation of a specific category or response. Statistical characteristics of observation were processed through stand-

ard procedures and descriptive statistics for the comparative analysis of statistical features. Descriptive statistics data were represented in the form of arithmetic mean, standard deviation, then frequency and percentage. Within the framework of comparative statistics, the single factor of variance with repeated measures (dependent measures) was used. In the applied tests, the threshold values of risk probability were significant, from 95% ($p < 0.05$) (statistically significant difference in parameters) and 99% ($p < 0.01$) (statistically highly significant difference in settings).

Results

An analysis of the data showed that over 90% of the respondents (pharmacists) engage in professional activities in the field of healthcare. Most respondents are pharmacists employed in the public sector (state-owned pharmacies), while pharmacists working in hospitals made up 4.4% of those surveyed. Such a structure corresponds with the formation of Pharmaceutical Chamber of Serbia members: according to data available from this organization, over 90% of its members were licensed pharmacists working in primary state-owned healthcare institutions/pharmacies at the initial start of the research, and of these, 4.1% were employed in the hospital sector (26). Regarding three areas of competency, defined in the National Competency Framework, pharmacists working in primary healthcare in Serbia (19), the surveyed pharmacists predominantly choose the development of expertise (competency) (Table 1).

Table 1. Professional activity and current positions vs. competence that requires development

	Number (%)
Categories that define your professional activity	
Public Health	525 (94.8%)
Production	5 (0.9%)
Research	3 (0.5%)
Academy	4 (0.7%)
Policy	10 (1.8%)
Other	7 (1.3%)
Describe your current position	
Public pharmacy - public or private	511 (93.4%)
Hospital pharmacy	24 (4.4%)
Industry	1 (0.2%)
Other	11 (2.0%)
What area of competence do you think you need to develop?	
Professional competences	303 (56.7%)
Organization and management competencies	90 (16.9%)
Professional and personal competences	141 (26.4%)

Besides expertise (competency), those factors which may impact choice and attractiveness regarding training, we also include modalities tied to education that provides for the presence of a lecturer (Face-to-Face Learning), with more or less interaction. Research results show that for most respondents, direct communication with a lecturer is essential, while less than one-fifth of the respondents view such interaction as insignificant. In the section of the survey where preferences are researched (Table 2), according to specific learning models on a scale of 1 to 5, over two-thirds of the respondents demonstrated the highest affinity towards the "case report" highlighting it as being

"most interesting" followed by workshops and lectures. The arrhythmic mean and standard deviation are given in Table 2.

An overview of Table 3 shows there is a statistically significant difference in the average score on various learning styles - Wilks's lambda = 0.531, $F(4, 490) = 108.07$, $p < 0.001$, partial Eta squared = 0.469.

Through single factor analysis of variants of repeated measures (Table 3), the provided alternative responses to the question "What learning method suits you best?" were compared.

Table 2. Which learning method is best for you?
(frequencies and percentages) (1-least interesting; 5-most interesting); Arithmetic means and standard deviations

Learning method	Which learning method is best for you? Number (%)					Score/test	
	1	2	3	4	5	Arithmetic mean	Standard deviation
1. Lectures	47 (9.0%)	49 (9.4%)	117 (22.3%)	153 (29.2%)	158 (30.2%)	3.64	1.21
2. Case Study - Discussion	17 (3.2%)	27 (5.1%)	35 (6.6%)	119 (22.5%)	330 (62.5%)	4.41	0.95
3. Workshops	24 (4.6%)	47 (9.1%)	86 (16.6%)	143 (27.7%)	217 (42.0%)	3.95	1.14
4. Panel discussions	33 (6.5%)	84 (16.5%)	154 (30.3%)	155 (30.5%)	82 (16.1%)	3.35	1.12
5. Review	34 (6.7%)	52 (10.3%)	118 (23.3%)	190 (37.5%)	113 (22.3%)	3.58	1.14

Table 3. Significance of the model

	Value	F	Hipothetical df	Error df	p-level	Partial Eta square
Wilks' Lambda	0.531	108.07	4	490	< 0.001	0.469

Subsequent comparison conducted helped by a post-hock test (Table 4) exhibits that the individual learning style, i.e., the scores for each, less the score for alternative forms of Demonstration and Lecture, statistically significantly different. It is evident that the average achievement for the modality "Case Report" – Discussion is highest, followed by Workshops as the preferred modality, while Panel Discussions had the lowest average score. In other words, while the "Case Report" – Discussion method of learning is most preferred, the Panel Discussion method was shown to be the least favorite.

In choosing an educational modality, the most interesting were identified as online forms of training (57.7%), where the first choice of half of the respondents were Digital formats available on the

Internet with the option to download podcasts. Internet access was found to be a significant limiting factor for 12.1% of the respondents. Of the other forms of "distance learning", we will mention CD/DVD, where approximately one-fifth of the respondents claimed this form of learning as their first choice, similar to live-stream webcasts and on-demand webcasts, which were indicated by almost 17% of pharmacists as their first choice.

A nonparametric chi-square test was performed to examine whether there is a statistically significant difference between the respondents who increasingly prefer interaction with a lecturer compared to those who deemed this form of communication as insignificant (less preferred), regarding the learning modalities they most prefer (Table 5).

A statistically significant difference was identified between respondent groups for the following learning modalities: Internet/online ($\chi^2 = 8.67$; $p = 0.013$); CD/DVD ($\chi^2 = 6.83$; $p = 0.033$); Interactive Workshops ($\chi^2 = 12.32$; $p = 0.002$); Digital formats available on the Internet with the option to download podcasts ($\chi^2 = 7.39$; $p = 0.025$). As shown in Table 5, the percentage of respondents who consider direct interaction with a lecturer as unimportant is somewhat higher than the percentage of those who claimed the Internet/online modality as their first choice (70%) compared to the group of respondents who consider that direct interaction with a lecturer is very important to their learning process, and to whom the Internet/online modality is the first choice is the case approximately 55% of the time. In terms of the modality that includes the use of CD/DVDs, the number of respondents who consider direct interaction with a lecturer as unimportant is slightly higher than those who claimed this modality of learning as their first choice (approx. 36%). This is opposed to the group of respondents who consider interaction with a lecturer as very significant and where this modality was chosen as the first choice in approximately 20% of cases. Furthermore, digital formats available on the Internet with the possibility of downloading pod-casts as the first

choice is mostly preferred by those respondents who consider interaction with a lecturer to be insignificant to their learning process (approx. 63%). In the second group, this ratio is somewhat lower and amounts to 36%. On the other hand, a significantly higher number of respondents who prefer interaction with a lecturer also prefer interactive workshops as a learning modality, i.e. claimed workshops as their first choice (approx. 48%), which is opposed to the other group who chose this modality as first choice in approximately 26% of cases.

Time factor analysis included questions about scheduling, i.e., days in the week perceived to be most suitable for participating in educational programs. Half of the pharmacists chose Saturday as their first choice (49.4%), while Sunday was deemed third (last) option by 40.8%. Regarding duration, over half of the respondents chose one hour as their first choice, while somewhat less than half of the respondents chose half-day training. The question on CPD participation over the last years, the pharmacists responded that 95% had participated in CPD, of these almost half claimed to have attended over 5 CPD sessions, while only 5% of those surveyed claimed to have not attended a single CPD session (Figure 1).

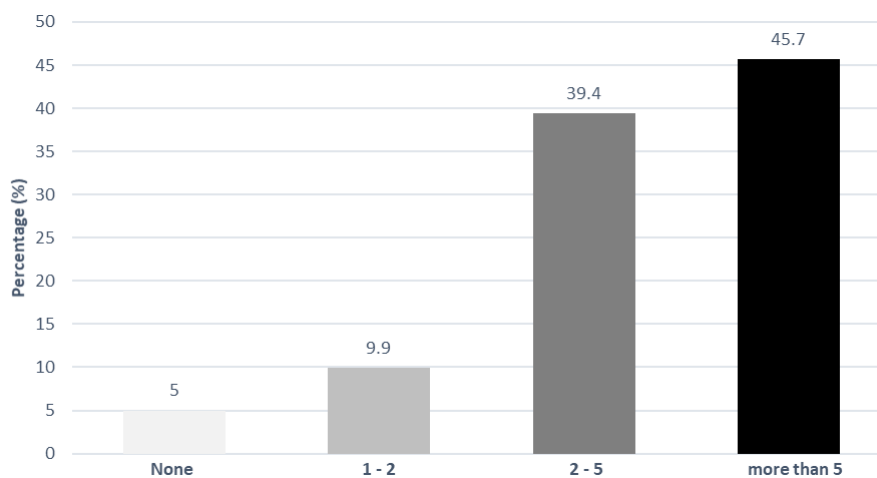
Table 4. Post hock test with Bonferroni correction

		The difference AS (I-J)	Standard error	p-level
1	2	-0.767*	0.064	0.000
	3	-0.308*	0.073	0.000
	4	0.291*	0.070	0.000
	5	0.065	0.071	1.00
2	1	0.767*	0.064	0.000
	3	0.460*	0.049	0.000
	4	1.059*	0.053	0.000
	5	0.832*	0.060	0.000
3	1	0.308*	0.073	0.000
	2	-0.460*	0.049	0.000
	4	0.599*	0.052	0.000
	5	0.372*	0.064	0.000
4	1	-0.291*	0.070	0.000
	2	-1.059*	0.053	0.000
	3	-0.599*	0.052	0.000
	5	-0.227*	0.047	0.000
5	1	-0.065	0.071	1.00
	2	-0.832*	0.060	0.000
	3	-0.372*	0.064	0.000
	4	0.227*	0.047	0.000

Table 5. Favorite learning modality versus preference for direct interaction with the lecturer (interaction with the lecturer is not significant and significant)

Which learning modality is best for you?	How important is direct interaction with the lecturer to your learning?		χ^2	p
	Not significant number (%)	Significant number (%)		
1. Conference			2.14	0.342
I choice	22 (35.5%)	146 (42.2%)		
II choice	18 (29.0%)	108 (31.2%)		
III choice	22 (35.5%)	92 (26.6%)		
2. Internet/"online" CE			8.67	0.013
I choice	62 (70.5%)	202 (55.2%)		
II choice	19 (21.6%)	93 (25.4%)		
III choice	7 (8.0%)	71 (19.4%)		
3. Teleconference			0.242	0.886
I choice	2 (5.3%)	15 (7.4%)		
II choice	13 (34.2%)	71 (34.8%)		
III choice	23 (60.5%)	118 (57.8%)		
4. CD/DVD			6.83	0.033
I choice	18 (36.0%)	50 (19.8%)		
II choice	15 (30.0%)	110 (43.5%)		
III choice	17 (34.0%)	93 (36.8%)		
5. Interactive workshops			12.32	0.002
I choice	16 (26.2%)	167 (48.4%)		
II choice	25 (41.0%)	117 (33.9%)		
III choice	20 (32.8%)	61 (17.7%)		
6. Digital formats available on the Internet with the ability to download podcasts automatically			7.39	0.025
I choice	47 (63.5%)	154 (46.5%)		
II choice	18 (24.3%)	105 (31.7%)		
III choice	9 (12.2%)	72 (21.8%)		
7. Live stream webcasts			2.13	0.345
I choice	10 (25.0%)	31 (15.7%)		
II choice	18 (45.0%)	95 (48.0%)		
III choice	12 (30.0%)	72 (36.4%)		
8. On-demand webcasts			1.29	0.525
I choice	8 (22.2%)	31 (16.3%)		
II choice	18 (50.0%)	90 (47.4%)		
III choice	10 (27.8%)	69 (36.3%)		

χ^2 - a chi-square; p - the p-value or probability value

**Figure 1.** How many continuing educations did you participate in last year? Response distribution (frequencies and percentages)

Discussion

Identifying the need for training through the self-reflection and self-assessment of competences presents an excellent challenge for pharmacist practitioners (27, 28), as a kind of active attitude toward one's own professional development in which pharmacists can directly participate in creating and implementing a learning plan, i.e., managing their professional development which in turn will allow for better results in terms of professional growth. When participants identify gaps in their practical work or education, they can then target their objectives and create plans to improve the practice of pharmaceutical medicine with measurable results (29, 30). In our research, over half of the respondents considered it necessary to develop their expertise (competency), which may implicate that they have identified their weaknesses concerning skill. Research conducted earlier among pharmacists working in publicly-owned pharmacies in Serbia, in the study of evaluation and self-evaluation, showed that among three competency clusters, the least developed were precisely expertise or competency (20), which supports the assumption that pharmacists have developed the capacity to assess training needs in certain areas. The results of our study are very similar to the results obtained by the survey conducted by Driesen et al. (31), where the highest number of respondents consider the development of expertise (competency) as the most significant motivational factor in terms of CPD. When asked about the significance of developing the overall skill of an organization and management, our respondents' answers were similar to those of the mentioned study, i.e., they considered development in this area to be of a lesser priority.

Furthermore, concerning the indicated affinity toward active participation and discussion with a lecturer giving priority to CPD programs involving a dynamic approach to training, the results are consistent with our research. On the other hand, the respondents in our study considered workshops to be of most considerable interest, followed by case reports, while lectures were ranked; third, in contrast to Driesen et al., where lectures were ranked first place (31). The study conducted by Namara et al. 2009 (32), also showed that Australian pharmacists prefer face-to-face interaction with a lecturer as the most interesting CPD model.

Research shows that education involving more interactivity between lecturers and the audience, where there is a dialogue, which allows the audience to ask questions and confront opinions, enables critical thinking and developing problem-solving and decision-making skills (33). Traditional education, through lectures "ex-cathedra", does not provide for the expected effect, i.e., it has been shown to improve participants' knowledge, hence a subjective feeling of satisfaction, however, has a minimal impact on clinical practice and patient outcomes (34). Learning interactive activities, i.e., apply multiple learning methods (case-based learning, demonstrations, feedback, simulations, or patient role-playing), lead to more positive outcomes (35). Simulation is likely to play a more significant

role in CPD because it allows for pharmacists to practice their skills and skill development in a safe environment, which supports learning based on competency (36, 37). Developments in the IT sector have enabled the modernization and greater availability of a variety of educational programs, which is reflected in the pharmacists who participated in our study in that a small percentage (approx. 12%) view Internet access as a limiting factor.

Similarly, other studies (31, 32) show that thanks to the Internet, CPD programs are now accessible also to pharmacists working in rural areas. Today, the educational applications on offer include training materials, including web practice and video recordings of interviews with patients, yet studies which evaluate the effects of different models of education continue to demonstrate that "live" training still has priority among pharmacists, in particular, the "case report", which was also confirmed by the results of our research. Other factors with an impact on the effect of learning include participant numbers, duration, and the complexity of the expected behavior of pharmacists while providing healthcare (30). It is imperative to establish a balance between pharmacists' preferences and training outcomes. Although there are several models for evaluation, a generally accepted set of standards has yet to be found that will allow one to measure the effectiveness of various educational models (38).

The amount of time that pharmacists from our study are willing to set aside for one training session, and the data stating that for 51.8% of those surveyed, time is the most limiting factor, implicates a potential barrier to CPD, considering that legislation links the amount of time spent on education and the number of required points to obtain a license. According to a study conducted in Scotland (39), as many as 9.8% of participants said that they do not have time for CPD, similar to Australian pharmacists (40), where, in addition to a lack of time, other barriers to CPD were identified as follows: a lack of motivation, availability (distance, cost), relevance and quality of educational content. Nonetheless, data obtained from our study, i.e., almost half of the surveyed pharmacists who participated in over 5 CPD sessions in the previous year, speaks of the fact that the time limit is being overcome. Research conducted in other countries indicates that the average amount of time spent on educational gatherings yearly is between 1 and 3 weeks (41), whereas the regulatory requirements referring to the number of training hours differ. In the United States, these are set at approximately 15 hours per year (2). According to research conducted by the International Pharmaceutical Federation (FIP), the average number of hours pharmacists spend per year on training is approximately (40), while the same study indicates that 9.8% of the respondents did not participate in CPD programs (42). In comparing these results with the results of our research, we can see that the number of pharmacists from our study who did not attend any training over the previous year is almost less than half that amount.

Conclusion

One crucial precondition of quality healthcare and patient safety is the competency of healthcare personnel. For this to be ensured, it is necessary to provide expert and technical prerequisites, and learning models that comply with the needs and possibilities of practitioners. The aim of this article is not to pessimistically summarize the future survival of the pharmaceutical profession but rather to show that for pharmacists, there is a bright and exciting future but one that will require pharmacists to be ready for. During their academic studies, pharmacists receive sound knowledge on both medication and the human body, but they also receive sound so-called STEM education: Science, Technology, Engineering, and Mathematics. According to many analysts, these disciplines are fundamental to the skills needed for the workforce of the future (6).

According to the results of this research, the development of information technology, availability, and variety of educational programs and models, i.e., the possibility of choosing and actively participating in education have been recognized by Serbia's pharmacists as a desirable way to go when it comes to professional development. Quality, multi-disciplinary knowledge, and a willingness to engage in lifelong learning are the keys to the development of the pharmaceutical profession. Of course, accountability and obligation do not only fall on the pharmacists themselves but also educators, i.e., the educational system and on society as well.

The academic community must adapt their programs to the development of the field and society, to introduce new learning technologies and methodologies. Problem Based Learning and acquiring functional know-how should be the founda-

tion from which the development of future curriculums is built. Moreover, to accept that it is impossible to establish a "one model fits all" curriculum in advance, but to have an understanding that educational programs should offer enough in the way of general knowledge but also prepare students for lifelong learning and introduce them to new skills such as digital literacy or innovative entrepreneurship.

On the other hand, each country should consider the regulation of the healthcare system and support the role of the pharmacist as an essential partner in developing a healthy society. Recognizing pharmacists' preferences in educational content and models based on self-evaluation and individual choice will have a positive impact on motivation and are an excellent basis to start from in terms of adapting models and tools used in continued education, which lead to more efficient training. Learning that is geared toward better clinical outcomes is based on a model, content, and duration in line with modern information, while at the same time being sufficiently attractive in motivating pharmacists to change, i.e. to improving both service provision and their education, and not the formal fulfillment of legal requirements for licensing.

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KONTINUIRANI PROFESIONALNI RAZVOJ FARMACEUTA U SRBIJI: PREFERENCIJE, INTERESOVANJA I ISKUSTVA

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Kao jedan od modela učenja kroz ceo život, kontinuirani profesionalni razvoj predstavlja ciljani, sistemski i prilagođeni oblik profesionalnog razvoja. Cilj rada je prikaz preferencija modela i oblasti edukacije, kao i interesovanja i iskustava farmaceuta u okviru istih.

Opservaciona studija preseka sprovedena je putem onlajn ankete objavljene na web stranici Apotekarske komore Srbije. Pored toga, napravljen je upitnik, koji se sastojao od 11 pitanja, u svrhu istraživanja. Anketu je popunilo 565 farmaceuta, od toga 93,4% zaposleno je u javnoj apoteci. Više od polovine ispitanika (56,7%) smatra da je potrebno da razviju stručne kompetencije. Pored toga, za većinu anketiranih farmaceuta značajna je direktna interakcija sa predavačem. Preko dve trećine ispitanika pokazalo je najveći afinitet prema „prikazu slučaja“, označivši ga kao „najinteresantniji“ metod, zatim slede radionice i predavanja, kao metode edukacije.

Kao najinteresantnije pokazale su se edukacije putem interneta (57,7%), kod kojih su kao prvi izbor kod polovine ispitanika odabrani digitalni formati dostupni na internetu, sa mogućnošću automatskog preuzimanja podkasta. Na pitanje o učešću u kontinuiranim edukacijama (KE) prethodne godine, farmaceuti su odgovorili da je 95% učestvovalo u KE, od toga skoro polovina na više od 5 KE. Prema rezultatima ovog istraživanja, razvoj informacionih tehnologija, dostupnost i raznovrsnost obrazovnih sadržaja i modela, izbor i aktivno učešće u obrazovanju, farmaceuti u Srbiji prepoznali su kao odgovarajući pristup u profesionalnom razvoju.

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Ključne reči: farmaceut, obrazovanje farmaceuta, kontinuirani profesionalni razvoj, kontinuirano profesionalno usavršavanje farmaceuta