

DISCUSSION ON INDIVIDUAL EDUCATIONAL TRAJECTORY AS AN INTEGRAL COMPONENT OF CONTINUOUS PROFESSIONAL DEVELOPMENT

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Abstract. *The system of continuous professional development of doctors in Ukraine needs detailed analysis and comprehensive dynamic monitoring to become a process that includes the possibility of a doctor's professional growth. The research aims to monitor approaches to the continuous professional development of dentists for the formation and improvement of professional competence skills by highlighting the role of individual educational trajectory based on the priority of work formats with professional information, methods of familiarization with it and its receiving. 2216 respondents took part in the research, filling out a questionnaire during scientific and practical events of professional schools for dentists in online mode in March 2023, which included questions on the definition and objectification of forms, formats, ways of implementing continuous professional development and the vision of approaches to acquiring new knowledge and skills. The data obtained was processed using the StatSoft Inc licence program. Analytical research methods and structural-logical analysis were applied. According to the survey results, an individual's educational trajectory should include attending lectures, professional seminars, working with scientific and practical publications. The main quality requirement for publications is their good illustration of clinical cases and algorithms for working with patients. The analysis results of the rating parameters of professional dental journals declare the request of the dental community to improve the quality of material content, visual design and a possible change in positioning.*

Keywords: *individual educational trajectory, continuous professional development, self-education, dentistry, educational activities.*

1. INTRODUCTION

The issue of high-quality continuous dental education and ways to optimize it at the request of modern society are priority areas of the medical education system in Ukraine today. It is well known that active practical activity at the undergraduate and postgraduate stages is a universally recognized effective pedagogical method that motivates and encourages continuous learning, as it provides an opportunity to consider experience not only through the prism of thought and analysis but also via specific actions aimed at mastering and improving practical skills.

Global developments in this direction make it possible to assert that experience is the basis for learning (Kitto, 2022; Undilashvili et al., 2019). However, the primary initiating component is mostly reflection – the process of in-depth self-knowledge by the subject of one's internal psychological states and acts, the ability of the student's consciousness in the process of perceiving activities to perceive himself/herself as well as a result of which consciousness appears, is broadcasted as self-awareness and in the future is the key to the formation of mature and well-founded professional opinion on a particular clinical case (Cook et al., 2022; Owen et al., 2020).

This concept was first used by the English philosopher D. Locke in the 17th century. Despite the rather significant advantages, for the high-quality implementation of the principles of continuous professional development (CPD) as a form of professional self-improvement, it is advisable to overcome a number of obstacles, including the doctor's workload and minimal time for training, insufficient funding, debatable issues of

Mazur, I. et al. (2023). Discussion on individual educational trajectory as an integral component of continuous professional development. *Advanced Education*, 23. DOI: 10.20535/2410-8286.295529

commercial sponsorship, the imperfection of the system itself, lack of clear definition of responsible parties and their specific roles in the development of this issue, lack of criteria for evaluating the effectiveness of CPD activities to determine economic, medical and social effectiveness, coordination of the activities of all interested parties, presentation of the doctor development to society (Cook et al., 2022; Drude et al., 2019). The above factors actualize the issue of individual educational trajectory as an integral component of CPD (Mazur et al., 2022). The concept of doctor education provides the possibility of expanding medical knowledge, skills and abilities. CPD, however, includes and surpasses this concept by recognizing and adding a wide range of competencies necessary to provide high-quality health care, including medical, managerial, ethical, social skills and personal qualities (Sockalingam et al., 2022; Griebenow et al., 2022).

Taking into account the priorities mentioned above and the complexities in the system of professional development, it is evident that this system in Ukraine needs detailed analysis and comprehensive dynamic monitoring in order to become a systematic process that inspires trust and transparency in society and at the same time includes the possibility of growing the professional personality of a doctor through actualization of the individual educational trajectory (Mazur et al., 2022).

The study **aims** to monitor approaches to the CPD of dentists by highlighting the role of the individual educational trajectory based on the priority of formats for working with professional information.

2. METHODS

2.1. Research Model/Design

In implementing the research design, an analytical method was used to consider and reflect on the results of monitoring approaches to dentists' CPD. (Ermer, 2018) The data obtained in the research were processed using the StatSoft Inc licence program, serial number – AGAR909E415822FA. The analytical research method and structural-logical analysis (Lee & Chiu, 2022; Shrestha & Dunn, 2020) were applied. The survey of dentists and the analysis of the research results were conducted under the leadership of the NGO "Ukrainian Dental Association", the group of companies "MedExpert" and the Ukrainian rating agency.

2.2. Sample/Participants

2216 respondents of different age groups took part in the research, filling out a questionnaire during scientific and practical events as well as conferences of professional schools for dentists in online mode in March 2023.

Respondents were dentists of all specialities and representatives of different regions of Ukraine (Table 1).

Table 1. Characteristics of socio-regional parameters of respondents

No	Region of interviewees' residence	Number of respondents
1	The city of Kyiv, Kyiv region	731
2	Lviv region	210
3	Vinnytsia region	138
4	Dnipropetrovsk region	133

5	Zhytomyr region	111
6	Khmelnyskyi region	99
7	Rivne region	86
8	Poltava region	85
9	Odesa region	82
10	Ivano-Frankivsk region	66
11	Cherkasy region	61
12	Ternopil region	55
13	Kharkiv region	53
14	Zaporizhzhia region	43
15	Mykolayiv region	43
16	Volyn region	39
17	Chernihiv region	39
18	Sumy region	32
19	Zakarpattia region	31
20	Chernivtsi region	25
21	Kherson region	20
22	Kirovohrad region	19
23	Donetsk region	11
24	Luhansk region	4
25	Total number of respondents	2216

The distribution of the interviewees by specialization was presented as follows, namely: 912 people (41.16%) had "dentistry" specialization, 241 people (10.88%) – "children's dentistry", 855 people (38.58%) – "therapeutic dentistry", 313 people (14.12%) – "orthopaedic dentistry", 94 people (4.24%) – "orthodontics", 239 people (10.79%) – "surgical dentistry", 13 people (0.59%) – "periodontology" and 24 people (1.08%) – "other specialization" (Fig. 1).

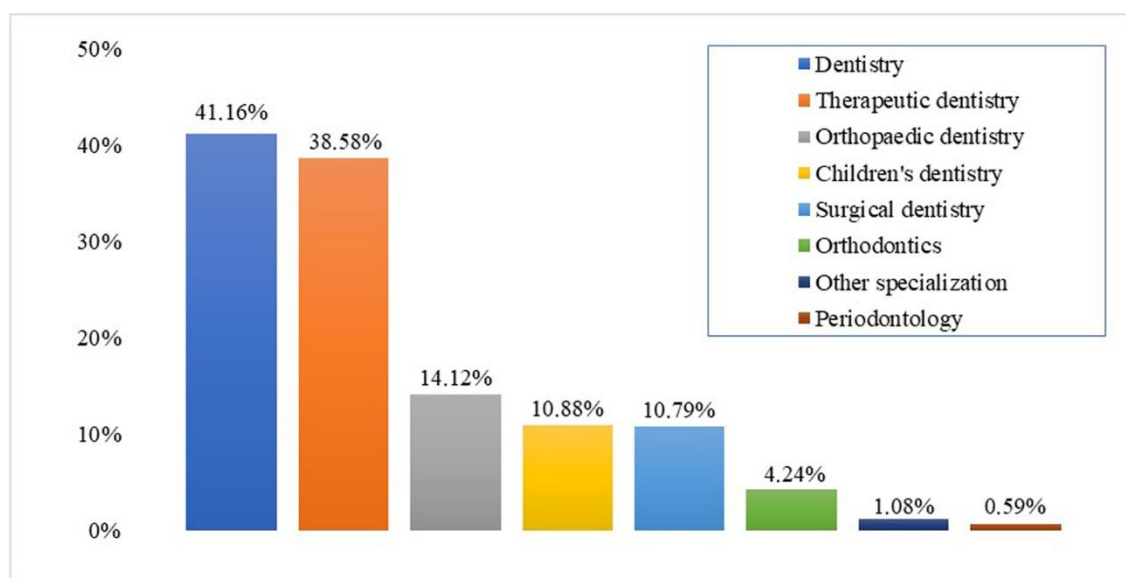


Figure 1. Professional characteristics and the total number of participants

2.3. Instruments and Procedure

The questionnaire was prepared by the NGO "Ukrainian Dental Association". It included socio-demographic questions and questions on the definition and objectification of forms, formats, methods of implementing CPD and the vision of approaches to acquiring new scientific knowledge and skills. The research was carried out in two stages, the first of which involved answering the announced questions. In the second stage, responses were monitored using analytical and statistical methods.

2.4. Data Analysis

The results of a survey of respondents were analyzed, and the importance of dental professional development activities was substantiated, which should include attending lectures and professional seminars and working with scientific and practical publications.

2.5. Ethical issues

The researches were conducted with the written consent of the participants and by the principles of bioethics set out in the Declaration of Helsinki, "Ethical Principles for Medical Research Involving Human Subjects", and the "General Declaration on Bioethics and Human Rights (UNESCO) (Shrestha & Dunn, 2020).

3. RESULTS

Quite important in the aspect of the implementation of an individual educational trajectory, as a component of the CPD of today's dentist, is the issue of the choice of ways of receiving and working formats with information of a professional direction. Thus, according to 1636 doctors (73.83%), the most optimal format for obtaining new professional information is lectures, professional seminars as well as scientific and practical events; another 1120 respondents (50.54%) receive information from books and methodological recommendations, 723 respondents (32.63%) borrow the necessary knowledge from domestic professional journals, and 302 people (13.63%) – from foreign publications. 581 persons (26.22%) of those interviewed acquired the knowledge necessary for professional growth by borrowing experience from colleagues. It should be noted that almost every second of the respondents, namely 1471 persons (66.38%), obtain the information necessary for professional growth from Internet resources (Fig. 2).

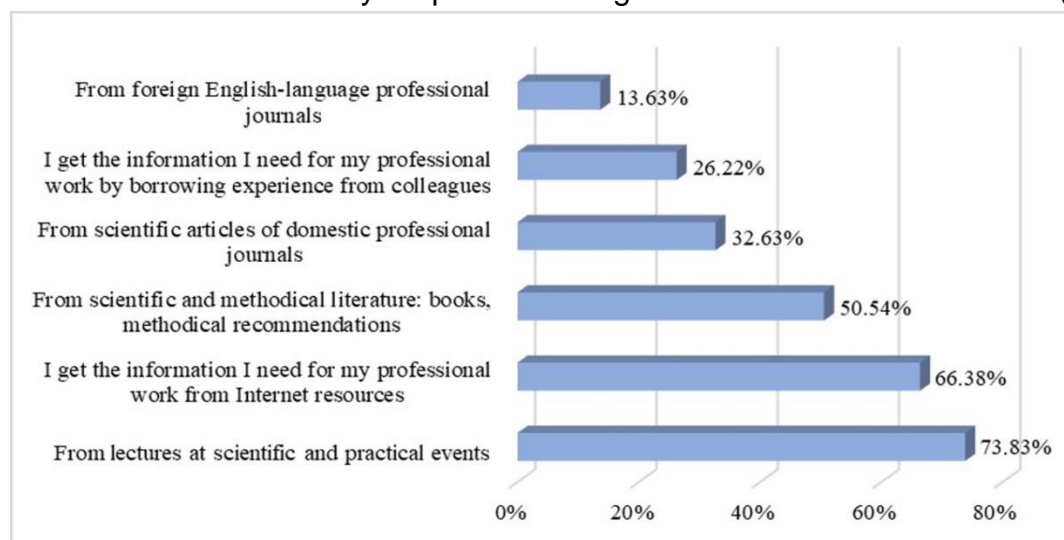


Figure 2. Sources of obtaining professional information

Among the sources of receipt of scientific periodicals on the topic of professional information, almost half, i.e. 1202 respondents (54.24%) prefer to process articles in the electronic version on the journal website, 996 people (44.95%) process Internet resources, another 992 respondents (44.77%) get acquainted with publications that are selected according to the subjects of professional schools on the corresponding educational website. 834 respondents (37.64%) prefer scientific publications by speciality, which are sent to an electronic inbox, 534 respondents (24.10%) prefer handling publications by working with paper journals as a way of obtaining information. 152 interviewees (6.86%) consider the most acceptable format for processing professional information to be the handling of scientific articles in medical libraries.

93 persons (4.20%) of the respondents noted the lack of opportunities to develop new scientific literature in their speciality due to professional overload, and another 36 respondents (1.62%) consider scientific publications in domestic journals to be uninteresting (Fig. 3).

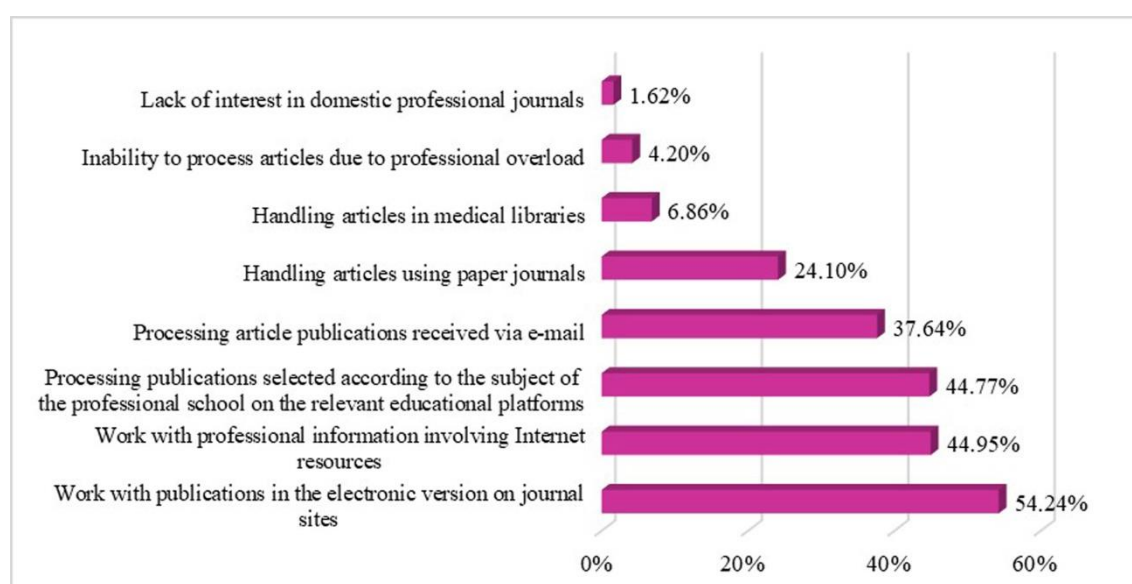


Figure 3. Characteristics of the most convenient ways of familiarizing with scientific periodicals within the framework of professional self-improvement

In response to the question of the frequency and regularity of reading scientific and practical articles in domestic professional journals, 600 respondents (27.08%) indicated that they do it when it is necessary through an Internet search, 524 persons (23.65%) indicated that they do it several times a month, 446 (20.13%) noted regularity in working with literature, 392 respondents (17.69%) announced the answer "when absolutely necessary" because they have enough information provided at thematic scientific and practical events. 156 doctors (7.04%) noted the frequency of working with literature as several times a week, and 98 respondents (4.42%) did not see the need to work with professional literature at all (Fig. 4).

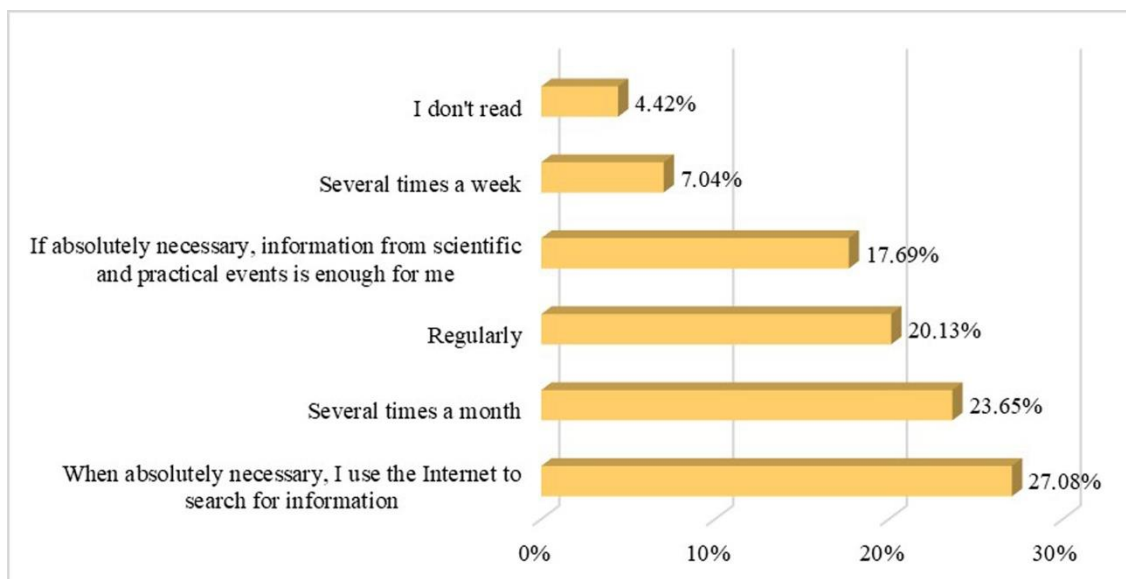


Figure 4. Characteristics of the systematicity of working with professional literature within the framework of the implementation of an individual educational trajectory

According to the results of the survey, the most interested doctors are in publications in which well-illustrated clinical cases are represented. 1415 respondents – 63.85% – indicated it in their answers. Articles with structured algorithms regarding clinical situations are also considered relevant, 1101 respondents – 49.68% – noted it. 1007 respondents (45.44%) prefer published lecture materials with practical materials. Somewhat less popular among the medical audience are original publications based on the results of scientific works; they were noted by only 563 respondents – 25.41%, reviews of scientific research and analytical articles were noted by 315 respondents, which is 14.21% (Fig. 5).

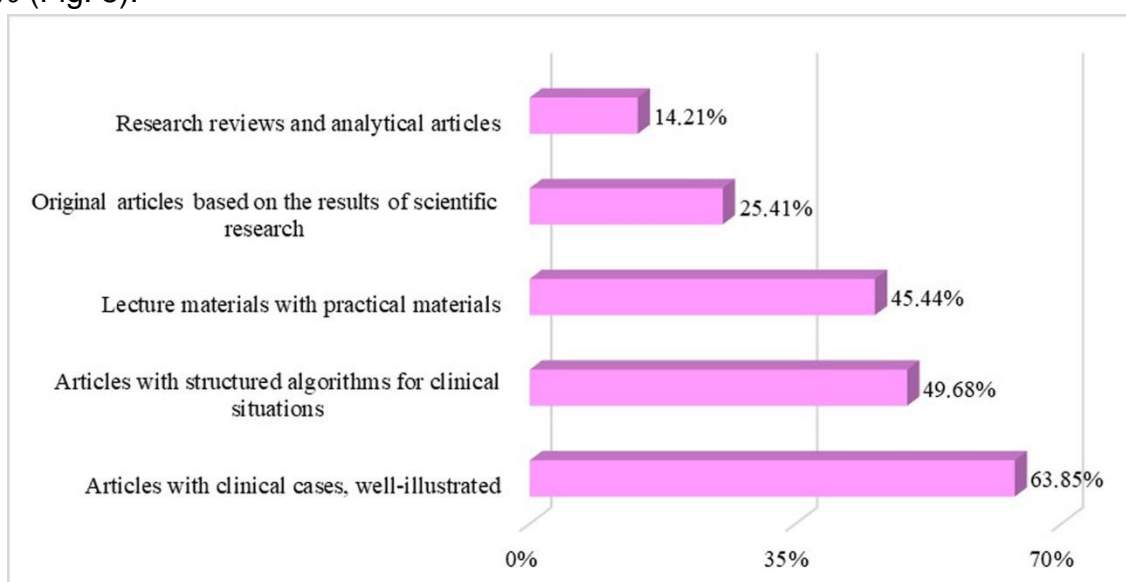


Figure 5. Priority parameters of the formats of professional scientific publications

Regarding the format of obtaining a new issue of a professional journal, every second of the interviewed doctors prefers the electronic option on the journal website, when the necessary publication can be found and downloaded through the search engine;

1149 respondents, which is 51.85%, indicated this preference in their responses. The most acceptable form of receiving professional literature for perusal is receiving the current issue in an electronic mailbox; this fact was noted by 613 people, 27.66% of the total respondents.

A relatively small number of respondents, namely 238 doctors (10.74%), consider purchasing on paper at scientific and practical events and exhibitions as the optimal format for obtaining current journals. And only 216 people (9.75%) prefer an annual subscription, followed by receiving a paper journal by mail (Fig. 6).

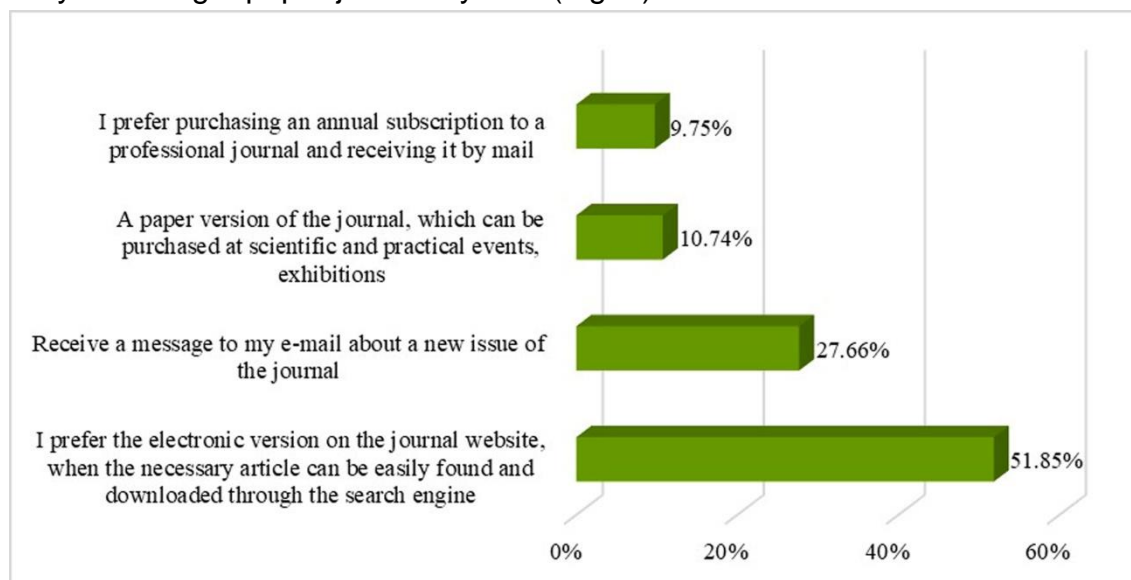


Figure 6. Characteristics of sources for obtaining professional information when working with periodicals

Quite interesting is the issue of the popularity of domestic professional publications, which are of the most significant interest to the Ukrainian dental community and, accordingly, are the most in-demand from a scientific and practical point of view. Therefore, among dental professional journals, the journal "DentArt" (the city of Poltava) is the most popular and in demand among doctors as a carrier of professional information. 997 respondents indicated it in their answers, which is 44.99%. Dentists also show an active interest in the journal "Actual Dentistry" (the city of Kyiv), as indicated by 827 respondents – 37.32%, "Bulletin of Dentistry" (the city of Odesa) – 442 respondents (19.95%) and "Oral and General Health" (the city of Kyiv) – 380 people (17.15%). 264 respondents and 11.91% consider the journal "Ukrainian Dental Almanac" (the city of Poltava) to be in demand from a practical point of view, 209 people (9.43%) – "Clinical Dentistry" (the city of Ternopil), and 102 respondents (4.60%) – the journal "World of Orthodontics" (the city of Lviv).

Notably, 508 doctors, which is 22.92%, indicated that they do not read the above-mentioned professional journals (Fig. 7).

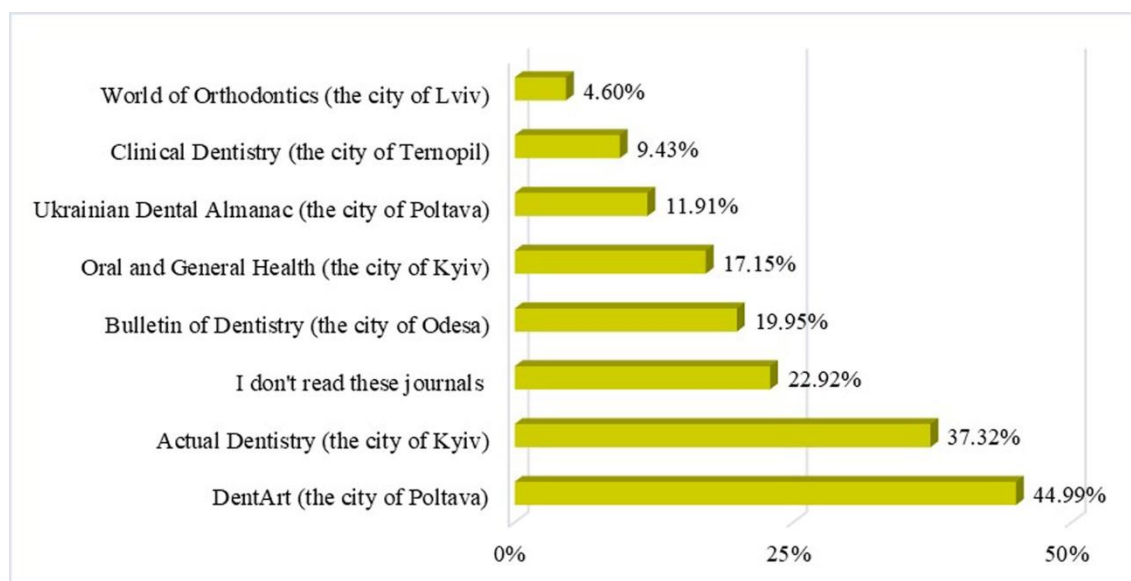


Figure 7. Results of monitoring the priority of professional periodicals at the request of the dental community

4. DISCUSSION

A variety of forms of implementation characterize the CPD models in different countries. However, the goal remains the same: to provide quality health care.

The concept of CPD implies the possibility of expanding medical knowledge, skills and abilities. Implementing the fundamentals of CPD requires professional skills beyond medical knowledge, such as management, education and training, information technology, auditing, communication and team building. Building on the well-developed tradition of lifelong learning in the medical profession, continuing education integrates the moral responsibility of each physician and improves job satisfaction.

The applied methodological approach made it possible to comprehensively monitor dentists' approaches to clinical practice by highlighting the role of the individual educational trajectory based on the priority of formats for working with professional information.

According to the survey results, the CPD system must necessarily include attending lectures and professional seminars and working with scientific and practical publications in free time from professional activities. At the same time, the main requirement for the quality of publications is their good illustration of clinical cases and algorithms for working with patients. The results of monitoring the rating parameters of professional dental publications declare the request of the dental community to intensify the marketing strategy of periodicals in the direction of improving the quality content of materials, visual design and possible changes in positioning.

Based on the priority of the format of obtaining new professional information among dentists, in the form of lectures, professional seminars, as well as scientific and practical events, there is an urgent need to diversify them, increase the scientific and practical level with an emphasis on world experience and profiling in response to the request of the dental community (Hearle & Lawson, 2019; Karas et al., 2020). At the same time, it is advisable to develop thematic, methodological recommendations, which would theoretically contain the material specified in the topics of lectures and professional

schools with reference points to the world standards of providing dental care since only 302 people (13.63%) expressed a desire to familiarize themselves with foreign dental novelties. The demand for lectures and professional seminars is logical and explained by the opportunity to review one's experience and training. Reflection and consideration of the material received during professional seminars guide further actions, subsequently allowing reflection and exploring personal experience and leading to a "new understanding and appreciation" of a particular clinical case (Segarra & Gentry, 2021). A reflective approach to self-education requires doctors to consider the information they have received and the processes by which the knowledge has been obtained (Sladek et al., 2019; Bryson, 2021).

Quite interesting from the point of view of medical collegiality is the fact that every fourth doctor noted that he/she acquires the knowledge necessary for professional growth by borrowing experience from colleagues (Dickerson et al., 2020). This indicates close cooperation, unity, trust and mutual respect in solving complex issues of diagnosis and treatment of patients, as well as highlights the principle of collegiality in dentistry, which is based on and proclaims respect for any opinion in the process of providing medical care, regardless of the status of the doctor, age and nationality (Creta & Gross, 2020). Characteristics of systematic work with the literature of a professional direction within the framework of implementing an individual educational trajectory make it possible to state the high quality of lectures and educational events held on various educational platforms (Henderson & Prescott, 2020). However, this does not contribute to the motivation for individual search work and actualizes the issue of professional burnout due to professional workload, which can cause emotional exhaustion and loss of interest in professional activities in the future (Yam et al., 2020). It should be noted that every fifth doctor systematically deals with issues of individual professional development by studying scientific professional journals (Winkelbauer, 2020).

It is worth noting the fact that almost every second surveyed doctor borrows the necessary information for professional growth from Internet resources (Hilty et al., 2019). This question is quite debatable since the quality of professional information, as well as the complete lack of responsibility for its reliability gives rise to medical errors and opens the way to iatrogenically induced conditions in patients (Kitto, 2021).

The results of monitoring the readability of professional dental journals by the target audience dictate the need for measures to preserve domestic specialized journals and to improve the quality scientific load of the latter with an increase in the number of publications with vividly illustrated clinical cases, algorithms, protocols and life stories of successful and bright personalities among the dental community (Volosovets et al., 2022).

The research contains certain methodological limitations, consisting of a specific part of subjectivity determined by the analytical approach.

Integration, analyzed experience and harmonization of systems for organizing professional development in different countries will make it possible to change behaviour in medical practice to improve healthcare and, as a result, develop a definition of criteria and the economic efficiency of this system.

According to the survey results, it is evident that virtually every second dentist took part in professional seminars, scientific and medical conferences, congresses and forums in real time. Every third attended practical master classes, which created the prerequisites

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for Ukrainian dentists to maintain and improve the standards of medical practice through the development of knowledge and skills.

The analysis results allow us to recommend a strategy for implementing the individual educational trajectory of CPD. The latter involves the integration of formal, informal and information components.

In the future, it would be advisable to monitor the quality of the implementation of CPD by dentists at higher educational institutions.

5. CONCLUSIONS

The work analyzes approaches to CPD of dentists by highlighting the role of an individual educational trajectory based on the priority of formats for working with professional information. An individual educational trajectory is an integral component of the dentist's CPD. According to the survey results, dentists believe it must include attending lectures and professional seminars and working with scientific and practical publications in free time from professional activities. At the same time, the main quality requirement for publications is their good illustration of clinical cases and algorithms for working with patients. Preference for electronic versions of journals on their sites is due to the realities of today and the corresponding formatting of the professional consciousness of modern society, which puts into a corner the question of the doctor's motivation as well as the desire and ability to search within the limits of an individual educational trajectory actively. The results of the analysis of the rating parameters of professional dental journals declare the request of the dental community to activate the marketing strategy of periodicals in the direction of improving the quality content of materials, visual design and possible change of positioning.

In the future, it is planned to monitor dentists' CPD to develop and improve professional competence skills based on the priority of forms and formats of implementation.

REFERENCES

- Bryson D. (2021). The changing landscape of professional development. *Journal of visual communication in medicine*, 44(2), 72–74. <https://doi.org/10.1080/17453054.2021.1903303>
- Cook, D. A., Stephenson, C. R., Wilkinson, J. M., Maloney, S., & Foo, J. (2022). Cost-effectiveness and economic benefit of continuous professional development for drug prescribing: A Systematic Review. *JAMA Network Open*, 5(1), e2144973. <https://doi.org/10.1001/jamanetworkopen.2021.44973>
- Cook, D. A., Wilkinson, J. M., & Foo, J. (2022). Quality of cost evaluations of physician continuous professional development: Systematic review of reporting and methods. *Perspectives on medical education*, 11(3), 156–164. <https://doi.org/10.1007/s40037-022-00705-z>
- Creta, A. M., & Gross, A. H. (2020). Components of an Effective Professional Development Strategy: The Professional Practice Model, Peer Feedback, Mentorship, Sponsorship, and Succession Planning. *Seminars in oncology nursing*, 36(3), 151024. <https://doi.org/10.1016/j.soncn.2020.151024>
- Dickerson, P. S., Russell, J. A., & Baughman, C. (2020). The professional development associate: a key role in professional development departments. *J Contin Educ Nurs*, 51(9), 394–396. <https://doi.org/10.3928/00220124-20200812-02>

- Drude, K. P., Maheu, M., & Hilty, D. M. (2019). Continuing professional development: reflections on a lifelong learning process. *The Psychiatric Clinics of North America*, 42(3), 447–461. <https://doi.org/10.1016/j.psc.2019.05.002>
- Ermer J. (2018). Analytical Target Profile: Establishment of precision requirements for assay. *Journal of Pharmaceutical and Biomedical Analysis*, 160, 73–79. <https://doi.org/10.1016/j.jpba.2018.07.035>
- Griebenow, R., Gehle, H. A., & Herrmann, H. (2022). Continuing professional development (CPD) within the workplace in a digitized healthcare system: The perspective from a German professional union. *Journal of European CME*, 11(1), 2038478. <https://doi.org/10.1080/21614083.2022.2038478>
- Hearle, D., & Lawson, S. (2019). Continuing Professional Development Engagement-A UK-based Concept Analysis. *The Journal of continuing education in the health professions*, 39(4), 260–268. <https://doi.org/10.1097/CEH.0000000000000245>
- Henderson, A., & Prescott, C. (2020). Re-envisaging continuing professional development to improve patient outcomes. *Nurse Education Today*, 89, 104402. <https://doi.org/10.1016/j.nedt.2020.104402>
- Hilty, D. M., Liu, H. Y., Stubbe, D., & Teshima, J. (2019). Defining professional development in medicine, psychiatry, and allied fields. *The Psychiatric Clinics of North America*, 42(3), 337–356. <https://doi.org/10.1016/j.psc.2019.04.001>
- Karas, M., Sheen, N. J. L., North, R. V., Ryan, B., & Bullock, A. (2020). Continuing professional development requirements for UK health professionals: a scoping review. *BMJ open*, 10(3), e032781. <https://doi.org/10.1136/bmjopen-2019-032781>
- Kitto S. (2022). The Technological Society and the Social Organization of Continuing Professional Development Interventions. *The Journal of continuing education in the health professions*, 42(4), 225–226. <https://doi.org/10.1097/CEH.0000000000000480>
- Kitto, S. (2021). The Importance of Proactive and Strategic Technology-Enhanced Continuing Professional Development. *The Journal of continuing education in the health professions*, 41(1), 3–4. <https://doi.org/10.1097/CEH.0000000000000343>
- Lee, G. B., & Chiu, A. M. (2022). Assessment and feedback methods in competency-based medical education. *Annals of Allergy, asthma & immunology: Official publication of the American College of Allergy, Asthma, & Immunology*, 128(3), 256–262. <https://doi.org/10.1016/j.anai.2021.12.010>
- Mazur, I., Hasiuk, N., Radchuk, V., & Stadnyk, M. (2022). Aspects of continuing professional development of dentists in wartime conditions through the prism of self-education and self-improvement. *Oral and General Health*, 3(4), 61–68. <https://doi.org/10.22141/ogh.3.4.2022.141>
- Mazur, I., Hasiuk, N., Suprunovych, I., Radchuk, V., & Mazur, P.(2022). Issues of self-education in the continuous professional development of Ukrainian dentists in the conditions of the COVID-19 pandemic. *Acta Stomatologica Naissi*, 38(85), 2370–2380. doi: 10.5937/asn2285370M
- Owen, J. A., Skelton, J. B., & Maine, L. L. (2020). Advancing the Adoption of Continuing Professional Development (CPD) in the United States. *Pharmacy (Basel, Switzerland)*, 8(3), 157. <https://doi.org/10.3390/pharmacy8030157>
- Segarra, V. A., & Gentry, W. A. (2021). Taking ownership of your career: professional development through experiential learning. *BMC proceedings*, 15(Suppl 2), 5. <https://doi.org/10.1186/s12919-021-00211-w>
- Shrestha, B., & Dunn, L. (2020). The Declaration of Helsinki on Medical Research involving Human Subjects: A Review of Seventh Revision. *Journal of Nepal Health Research Council*, 17(4), 548–552. <https://doi.org/10.33314/jnhrc.v17i4.1042>

- Mazur, I. et al. (2023). Discussion on individual educational trajectory as an integral component of continuous professional development. *Advanced Education*, 23. DOI: 10.20535/2410-8286.295529
- Sladek, R. M., McAllister, S., & Walsh, K. M. (2019). Translating health professional education research evidence into effective continuous professional development. *The Medical Journal of Australia*, 210(3), 113–114.e1. <https://doi.org/10.5694/mja2.12111>
- Sockalingam, S., Rajaratnam, T., Gambin, A., Soklaridis, S., Serhal, E., & Crawford, A. (2022). Interprofessional continuing professional development programs can foster lifelong learning in healthcare professionals: experiences from the Project ECHO model. *BMC Medical Education*, 22(1), 432. <https://doi.org/10.1186/s12909-022-03500-w>
- Undilashvili, A., Ebralidze, K., & Beriashvili, R. (2019). Continuous professional development of healthcare workers - analysis of the current state. *Georgian Medical News*, 297, 158–163. PMID: 32011314
- Volosovets, O. P., Lurin, I. A., Naumenko, O. M., Volosovets, A. O., & Kryvopustov, S. P. (2022). Current challenges for the health care system due to the lack of medical staff and the continuous professional development of doctors. *Wiadomosci lekarskie*, 75(5 pt 1), 1136–1139. <https://doi.org/10.36740/WLek202205115>
- Winkelbauer, S. (2020). An Authentic, Practice-Based Assessment as a Catalyst for Continuous Professional Development. *Pharmacy*, 8(1), 15. <https://doi.org/10.3390/pharmacy8010015>
- Yam, C. H. K., Griffiths, S. M., & Yeoh, E. K. (2020). What helps and hinders doctors in engaging in continuous professional development? An explanatory sequential design. *PloS one*, 15(8), e0237632. <https://doi.org/10.1371/journal.pone.0237632>

Acknowledgments

We would like to express our gratitude to the colleagues who participated in our research and expressed their own vision regarding the implementation of the CPD system.

We also thank the editorial board of this publication for the opportunity to publish the research results in this journal.

Sincere thanks to the anonymous reviewers for the opportunity to make this publication a complete scientific and methodological work.

Funding

This research received no specific grant from any funding agency.

Conflict of interest

The authors declare no conflicts of interest.

Received: August 30, 2023
Accepted: December 13, 2023