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## RESEARCH ON THE USE OF MOTIVATIONAL TOOLS IN THE PRACTICAL ACTIVITY OF PHARMACEUTICAL SPECIALISTS

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**The aim.** Research on the peculiarities of the use of modern motivational tools by domestic employers in the pharmaceutical industry (including training and involvement of pharmaceutical specialists in social projects).

**Materials and methods.** An anonymous online survey in the Google Form was conducted from April 3, 2021 to November 1, 2021 on the social network "Facebook" (including in four pharmaceutical groups of this network).

**Methods:** analysis, synthesis, and generalization.

**Results of the research.** The main motivating factors of respondents and the main motivational tools used by employers in the pharmaceutical industry have been identified. The state of training and education during professional activities and the evaluation of their effectiveness by respondents have been studied. Professional and motivational-psychological trainings are in the lead in the ranking of educational projects (75.2 % of respondents). The methods of evaluation of pharmaceutical specialists used by employers in the pharmaceutical industry have been generalized. The attitude of respondents to the participation of employers in the pharmaceutical industry in social and charitable projects has been studied. Most respondents (67.5 %) positively perceives the participation of employers in social and charitable projects, for some of them this is a motivational advantage when choosing a place of work.

**Conclusions.** An online survey of 508 pharmaceutical professionals, conducted in a Google Form has allowed us to establish the features of current motivational approaches used today in pharmaceutical organizations and the attitude of respondents to them. It has been found that such motivational tools as trainings (innovative form of education) (55.1 %), as well as material forms of incentives (73.2 %) are widely used. At the same time, the main topics of the trainings are regarding the professional aspects of activity. An important factor in the life of a pharmaceutical organization is its social and charitable work, which forms a positive attitude towards it on the part of pharmaceutical professionals, and sometimes serves as a motivational advantage in choosing a place of work.

**Keywords:** motivational tool, questionnaire, pharmaceutical specialist, education, training, social and charitable project

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## 1. Introduction

Expansion of the professional roles of the pharmaceutical specialist (PhS) in the XXI century necessitates the search for new approaches to the realization of creative potential during their professional activity [1].

Job satisfaction has had a great influence on employee motivation, while the level of motivation affects productivity and, consequently, results of the activity [2, 3]. Job satisfaction and its attractiveness largely determine intentions regarding employee turnover and its actual performance [4, 5]; moreover, the correlation between job satisfaction and staff turnover is significant and consistent [6]. In general, regardless of the field of activity, job satisfaction has a direct impact on career satisfaction [7].

An analysis of PhS's career satisfaction by gender showed that women are more satisfied with their careers than their male colleagues [8].

A national survey in the USA has found that 67.2 % of pharmacists were satisfied with their work [9],

in Arizona (USA) this was noted by all hospital pharmacists [10], and a number of PhSs in community pharmacies indicated high job satisfaction [11]. At the same time, senior US PhSs with higher salaries, working in independent practices, experience the greatest job satisfaction [12]. However, more than 68.0 % of US pharmacists experienced stress at work and role overload, and 48.0 % experienced conflict between work and home [9].

According to the research, according to the management of hospital pharmacies in Saudi Arabia, motivators such as financial rewards have been more important than non-financial incentives and benefits. However, the most influential motivating factors for pharmacists have been recognition, promotion, job satisfaction, job feedback, autonomy and importance of tasks [13, 14]. However, even though most of these pharmacists were satisfied (39.1 %) and slightly satisfied (24.6 %) with their current work, about two thirds of them (61.9 %) had intended to leave it [15].

It has been shown that among South African clinical pharmacists, higher motivation to work is found in

graduates who do not practice as a clinical pharmacist, as well as in graduates who do not receive additional financial benefits for clinical services [16]. In turn, among hospital pharmacists of the specialized hospital Tikur Anbesa (Addis Ababa, Ethiopia), 53.0 % of respondents were satisfied with their work [17]. However, the PhSs of Eastern Ethiopia are characterized by a low level of job satisfaction (32.7 %) [18]. In Zimbabwe, pharmacists in the manufacturing industry had the highest job satisfaction and the lowest – in large-chain retail pharmacies [19].

Iraqi public pharmacists were found to be moderately satisfied with their work, with their level of satisfaction being influenced by gender, age, years of practice, working regime and working hours [20]. For public pharmacists in Pakistan, this indicator was low (26.7 %) [21], and for PhSs in India – very low (17.5 %) [22].

It has been found that 90.0 % of hospital pharmacists in Guangdong Province (China) are satisfied with their work [23]. The average score of job satisfaction and organizational commitment in Malaysian state pharmacies was 58.1 %, and the probability of remaining among the state workforce was 71.3 % [24]. At the same time, the quality of working life of medical representatives in Vietnam is higher than that of hospital pharmacists [25].

Public pharmacists in Northern Ireland and Jordan have been found to be less satisfied with their work than hospital pharmacists, and to increase their motivation and competence, it is necessary to increase their job satisfaction [26, 27].

It has been shown that important factors of job dissatisfaction are low wages, high physical activity, insufficient training, education and promotion, inefficient management systems, etc. [17, 18, 28–32]. At the same time, dissatisfaction with work is one of the factors of emotional burnout of public pharmacists [33] and has a negative impact not only on productivity but also on the quality of patient care and safety [32]. In particular, UK public pharmacists believe that their workload is increasing, which increases work-related stress and reduces job satisfaction [34].

Analysis of the influence of various motivational factors on PhSs is one of the areas of Ukrainian scientists' research as well. They have analysed various factors of motivation (internal and external) and demotivation of the PhSs in Ukraine. At the same time, there is a change in the priorities of pharmaceutical professionals regarding motivational factors from mostly material incentives [35–37] to such motivators as the ability to promote and create as well as to maintain a friendly corporate climate, interesting and motivating work, etc. [38]. The frequency of use of these motivational factors in practice has been studied [38].

It has been found that for pharmacists with a high level of professional competence the main motivating factor for drug recommendation is their effectiveness [39]. The main psychological indicators of the social orientation of pharmacists in professional activities – the level of social desirability and motivation for success have been studied and it was found that there is a directly proportional relationship between them [40]. It has been found that PhSs today are not receiving the desired material and

moral satisfaction from working in pharmacies, which causes high staff turnover [41].

However, the peculiarities of the use of certain motivational tools by employers, including training and involvement of subordinates in social projects, have not been studied, which determined the relevance of our research and the aim of work.

## 2. Planning (methodology) of research

The research algorithm included the following stages:

1. Preparation, which involved search, selection and analysis of scientific publications devoted to the study of the impact of various motivational factors on workers in various fields, including pharmacy.

2. Elaboration of research methodology, which included the development of a questionnaire to study the use of motivational tools in PhSs' practice and its validation, as well as justification of the size of a simple probabilistic sample of respondents.

3. Conducting an online survey by distributing the questionnaire in professional pharmaceutical networks, collecting, and studying the information obtained.

4. Statistical processing of survey results considering the consistency of answers.

5. Analysis and interpretation of research results, drawing up conclusions. Recommendations for pharmaceutical organizations and specialists on the use of modern motivational tools in practice.

## 3. Materials and methods

Quantitative method of information gathering has been used – Computer Assisted Web Interviewing of specialists with clear characteristics who were active users of the Internet. To do that, a questionnaire in the Google Form has been developed, which contained a passport and the main part of 15 questions about the peculiarities of current motivational approaches used today in the pharmaceutical industry, and the PhSs' attitude towards them. To some questions of the questionnaire several answers could be given.

With the help of online questionnaire, a survey of 508 Ukraine PhSs has been conducted on the social network "Facebook", including four pharmaceutical groups of this network [42–45]. The research period is from April 3, 2021 to November 1, 2021. The information obtained during the survey has been processed using the methods of analysis, synthesis, and generalization.

Participation in the online survey was voluntary, did not require the provision of personal data, the answers were anonymous, and there was no encouragement to participate.

To calculate the simple probabilistic sample ( $P=0.954$ ) a simplified formula for a general totality of more than 5,000 units (the number of PhSs working in pharmacies was 48,200 people) has been used:  $n=1/\Delta^2$ , where  $n$  was the sample size,  $\Delta$  was the fraction of the given sampling error [41, 46]. The marginal sampling error in the case of 508 PhSs was 0.051 or 5.1 %. Thus, the obtained survey results showed the studied reality within the usual degree of reliability ( $\Delta=3\text{--}10\%$ ).

Statistical processing of the results of the passport part of the questionnaire has been performed by Friedman's ANOVA method in the STATISTICA program, considering the Kendall's concordance coefficient. The greater its value, the higher the degree of agreement of respondents. Differences were considered significant at  $p > 0.05$ . The correlation between the answers to the main part of the questionnaire has been established using the Spearman correlation coefficient ( $\rho$ ) with a significance level of  $p < 0.05$ . The closer the modulus of Spearman correlation coefficient to one, the stronger the correlation between the studied values [47].

Respondents have represented almost all regions of Ukraine except the annexed Autonomous Republic of Crimea and the occupied districts of Luhansk and Donetsk region.

The distribution of respondents by regions of their residence is presented in Table 1.

Table 1  
Structure of respondents by regions of their residence, %

Region	%	Region	%	Region	%
Lviv	25.6	Volyn	3.3	Kherson	2.0
Zaporizhzhia	8.3	Odessa	3.3	Chernihiv	1.8
Kyiv City	6.5	Chernivtsi	3.3	Cherkasy	1.2
Ivano-Frankivsk	4.9	Khmelnitskyi	3.1	Sumy	1.2
Dnipropetrovsk	4.7	Kyiv	2.8	Donetsk	1.4
Rivne	3.9	Mykolaiv	2.8	Kirovohrad	1.0
Kharkiv	3.9	Zakarpattia	2.8	Poltava	1.0
Ternopil	3.5	Zhytomyr	2.6	Luhansk	0.4
Total					100.0

Among the PhSs respondents, 43.7 % were young people aged 20 to 30, 31.5 % were 31 to 40, and 41 to 50 were 17.3 %. Other age categories were slightly represented: from 51 to 60 years – 6.1 % and over 60 years – 1.4 %, which was due to lower Internet activity of 50+ PhSs.

Almost a third of respondents (32.1 %) held the positions of heads of pharmacies, pharmacy network, pharmacy warehouse and their structural units, more than a quarter – assistants to pharmacists (28.9 %) and pharmacists (26.8 %). At the same time, 12.2 % of respondents were medical and pharmaceutical representatives. 38.8 % of the respondents had work experience in the specialty up to 5 years, 18.1 % – from 6 to 10 years, 17.1 % – from 11 to 15 years, 8.3 % – from 16 to 20 years, and 17.7 % of respondents – more than 20 years. Kendall's concordance coefficient by the three types of factors evaluated (age, experience, position of respondents) and the average of rank correla-

tions was 0.57, i.e., there is a noticeable agreement of respondents' thoughts [47]. Meanwhile, the value of the coefficient was statistically significant (Pearson's matching criterion  $\chi^2$  ( $N=508$ ,  $df=8$ )=2,310.064;  $p=0.00000$ ).

#### 4. Results of the research

As could be seen from the data in Fig. 1, the most important among the six factors that motivate PhSs in their profession was the possibility of personal realization (51.8 % of responses). An important motivational factor was also the level of wages, which was stated by 46.3 % of respondents. For almost a third of the PhSs respondents, the opportunity to succeed (34.6 %) and the opportunity to pursue a career (30.1 %) were important, and for about a quarter of them – the prestige of the profession (25.4 %) and its humanistic orientation were important (23.8 %). It turned out that for one-fifth of respondents (20.3 %) there were other motivators of the profession. However, they did not specify which ones.

The opportunity to study and raise the professional level (participation in various trainings) was the predominant motivational practice used by employers in the pharmaceutical industry: it was indicated by more than half (55.1 %) of the surveyed PhSs (Fig. 2). In almost half of the cases (48.2 %), respondents indicated that employers used only material forms of incentives (bonuses, raises or fines). Instead, in a quarter of cases (25.0 %) employers used both material and socio-psychological forms of motivation. At the same time, 14.6 % of respondents also consider participation in social projects (charitable initiatives, organization of sports events, etc.) to be a motivating factor. It should be noted that 13.8 % of PhSs respondents stated that their employers did not use any form of motivation.

More than half of the respondents indicated the possibility of personal realization as the most important motivating factor including studying, which was in modern conditions impossible without acquiring knowledge. The predominant form of PhSs motivation used by employers was providing them with learning opportunities and raising the professional level. As the result of this, the next questions of the questionnaire on the peculiarities of the PhSs trainings and the attitude to them acquire special meaning.

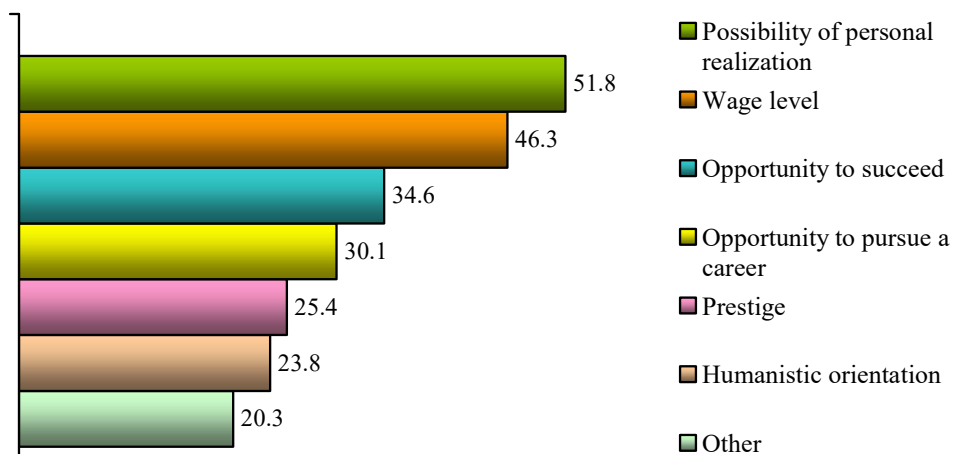


Fig. 1. PhS motivational factors, %

It has been found that most respondents (88.0 %) underwent training and education during professional activities, with more than half - several times a year (56.1 %), less than a fifth - about annually (16.3 %) and less than once a year - 15.6 %. It should be noted that 12.0 % of respondents did not participate in such events at all. It has been established that the Spearman's correlation coefficient was high between the answers to these two questions ( $\rho=0.6$ ).

About two-thirds of respondents (60.8 %) noted that the training and education was organised and provided by the employer. At the same time, more than two thirds of PhSs (67.9 %) have been raising their professional level on their own. Spearman's correlation coefficient between the answer to the question about the training and education during professional activities and whether they were organized by the employer was mediocre ( $\rho=0.40$ ). As well as the average Spearman's correlation coefficient between the answer to the last question and the answer regarding the frequency of such trainings and exercises ( $\rho=0.39$ ).

As could be seen from data in Fig. 3, most training events provided by employers for their PhSs, had been dedicated to professional aspects of activities (increasing sales, familiarity with new drugs or products of a particular company) - this was indicated by three quarters (75.2 %) of respondents.

Motivational and psychological trainings on personal growth techniques, emotional intelligence, soft skills, etc. also played an important role in PhSs learning, as indicated by more than a third (36.4 %) of respondents. Third place was occupied by training in medical care - 11.8 % of responses.

In the ranking of trainings that interviewed PhSs attended on their own, the first and second place was occupied by topics like the trainings of employers, but with a slightly smaller number of answers. Thus, more than half (56.3 %) indicated professional aspects of activity, and two-fifths (40.4 %) indicated motivational

and psychological aspects. In the third place - training in medical care, but with almost twice as high indicator (20.7 % of responses). The most significant difference in the ranking of training topics concerns the study of foreign languages: 20.3 % of respondents studied them on their own, while employers conducted such trainings only in 3.9 % of cases.

In general, two-thirds (65.9 %) of PhSs positively evaluated the effectiveness of trainings and education, and 14 % of respondents believed that motivational trainings aim at success. At the same time, 10.4 % of respondents indicated that trainings and education are only effective when they have a professional or specific focus (for example, first aid). About a tenth of respondents thought negatively about this practice: 6.7 % of them said that motivational training has a short-term effect, and 3.0 % believe that the effectiveness of such measures was zero.

The next questions of the questionnaire concerned the methods of assessing the PhSs by the management of the pharmaceutical organizations (PhOs) and possible pressure from employers.

It turned out that a separate department of training and development of PhSs was in almost half (48.6 %) of PhOs, in which respondents worked.

Between the answers to the question about the frequency of training and exercises and the presence of a separate department in the PhOs Spearman's correlation coefficient was  $\rho=0.35$ , ie the correlation between the studied values was mediocre.

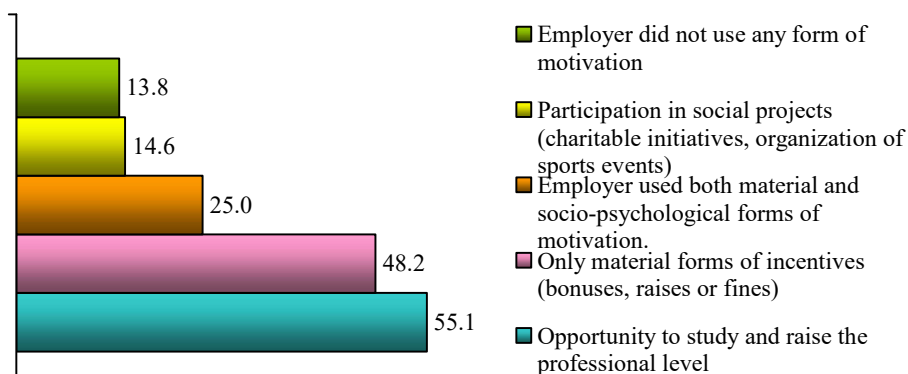


Fig. 2. Forms of motivation used by employers, %

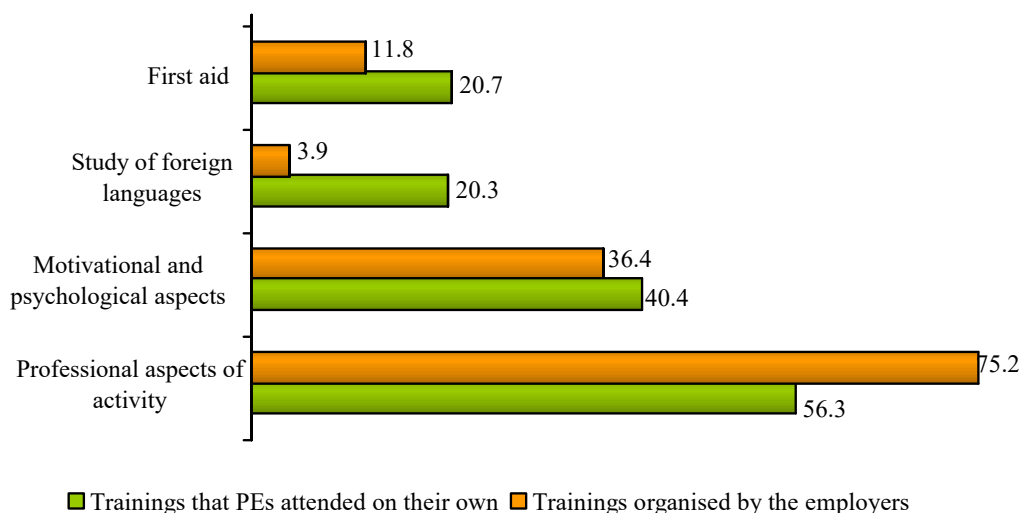


Fig. 3. Topics of trainings and exercises, which the respondents have attended, %



Almost half of the respondents (49.0 %) indicated that employers used testing to assess subordinates. At the same time, almost two-fifths (39.2 %) of respondents noted that in their PhOs there was a dependence of salaries on the level of sales. In addition, employers also used the score of the PhSs and, accordingly, their rating, as indicated by almost a quarter of respondents (23.4 %). At the same time, more than a quarter (27.8 %) of respondents stated that employers did not practice any form of PhSs assessment (Fig. 4).

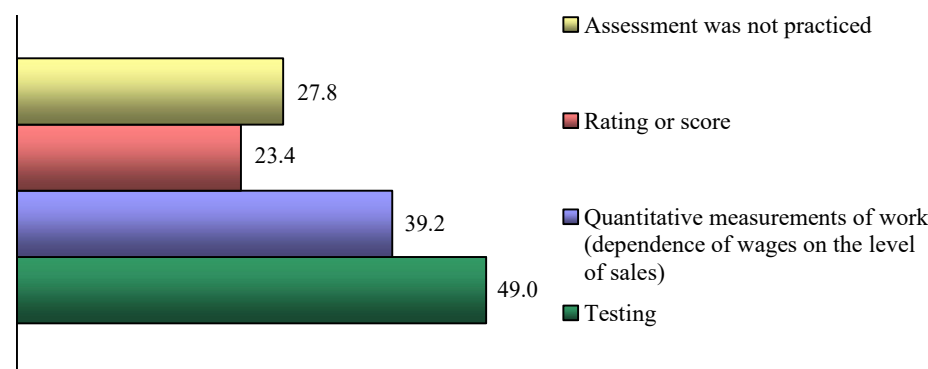


Fig. 4. Rating of methods of evaluation of respondents by PhOs management, %

More than half of PhSs (54.1 %) were feeling pressure from the employer. According to two-fifths (39.8 %) of respondents, this was manifested in the need to implement the sales plan, almost a third (30.3 %) thinks it was in the priority sale of the mandatory list of drugs and less than one-fifth (15.6 %) – in other restrictions.

The concluding questions of the questionnaire were devoted to studying the impact of such a factor as participation in social and charitable projects and establishing its motivational significance. Two-thirds (67.5 %) of respondents indicated that their employer organized or supported charitable and social projects. At the same time, more than three quarters of respondents (77.4 %) took an active part in such activities and less than one-fifth (16.3 %) participated sometimes. Only 5.3 % of respondents considered such activities simply a tribute to modern social trends. It is noteworthy that the proposed answer, “Such projects was a waste of time” was chosen by only 1 % of the respondents.

The organization and participation of the employer in social and charitable projects was important for almost three quarters (73.0 %) of PhSs. As such activities gave the opportunity to feel like a part of a positive team (27.8 % of respondents), contributed to a positive image of the employer and PhSs (23.6 %), was an advantage in choosing a place of employment (11.4 %) and an own internal need (10.2 %).

However, more than a quarter (27.0 %) of PhSs did not consider social and charitable activities of employers' organizations important, as participation in such projects is an individual choice of PhSs (20.3 %) and such activity is only an advertising strategy to improve PhS's image (4.9 %) and is not important and effective (1.8 %).

Thus, in most respondents, social and charitable activities of employers formed a positive attitude, for some of them was a motivational advantage when choosing a place of work. At the same time, Spearman's correlation coefficient between the answers to these last two

questions of the questionnaire had a value of  $\rho=0.31$ , i.e., the correlation between the studied values was mediocre. For the other questions of the questionnaire, this indicator was in the range from  $-0.007$  to  $0.27$ , i.e., the relationship was absent or weak [47].

## 5. Discussion of research results

Domestic scientists at various times have found that the main external incentive for the PhSs to work was material motivation in the form of monetary compensation for the work performed,

the level of wages [35–37]. In this case, this stimulus by the degree of influence on PhSs was a strong motivator and was universal [38].

Our study has showed that the three main motivating factors in the professional activities of PhSs were the possibility of personal realization, the level of wages and the ability to succeed (51.8, 46.3 and 34.6 % of respondents, respectively).

Thus, there was an evolution of the content of the needs of PhSs, because such a secondary need as the possibility of personal realization was predominant in the surveyed of PhSs.

As stated above, the main motivational tools used by employers were the provision of opportunities for training and professional development for their PhSs or only material forms of incentives (55.1 and 48.2 % of respondents respectively). This was consistent with the results of the study of B. P. Hromovyk and Yu. I. Kremin, who showed that pharmacy chains in four-fifths of cases encouraged PhSs to acquire new knowledge through trainings, workshops, and seminars. However, the main aim of such activities was to increase marketing skills for the promotion of medicines and medical devices, rather than providing new and useful pharmaceutical and medical information [48]. This was confirmed by the data obtained because of our study, as 39.2 % of PhSs respondents indicated that in their PhOs there was a dependence of wages on the level of sales.

More than four-fifths of PhSs respondents (88.0 %) received training and education during their professional activities, and two-thirds (65.9 %) of them rated their effectiveness as generally positive. Professional and motivational-psychological trainings were in the lead in the ranking of educational projects. Such practice is positive, as research conducted by scholars from Sweden has confirmed that high access of pharmacists to continuous professional development was the most important factor influencing their job satisfaction [49].

It could be considered positive that almost half (45.9 %) of PhSs respondents did not feel pressure from employers regarding the implementation of the sales plan, the need to sell the mandatory list of drugs and other restrictions. The participation of employers of the pharmaceutical industry in social and charitable projects formed

a positive attitude towards them on the part of the PhSs and was important for almost  $\frac{3}{4}$  of them. Moreover, this was a motivational advantage when choosing a place of work for more than a tenth of PhSs (11.4 %).

Given that the three main motivating factors in the professional activities of the PhSs are the possibility of personal realization, the level of wages and the desire to succeed, we have proposed recommendations for pharmaceutical organizations, which include:

1. Application of modern motivational methods in practice, namely:

- direct economic motivation (in addition to the appropriate level of wages, performance bonuses and individual rewards as recognition of the value of a PhS should be used) and indirect economic motivation (surcharge for seniority, one-time financial aid, discounted travel card, etc.). After all, meeting the secondary needs of employees (personal realization, success) is impossible without meeting basic needs;

- non-monetary or socio-psychological motivation of work (career and professional growth, rational work schedule, educational prospects, etc.)

2. Review of the application of certain organizational and administrative methods of motivation, in particular regarding the absolutization of the increase in the price of the average check and the implementation of the plan for the sale of medicines on the mandatory internal organizational commercial list.

3. Active implementation of measures of continuous professional development, which will contribute to the replenishment of professional knowledge, and hence the further personal realization of PhS.

4. Wider practice of corporate social responsibility, as the participation of pharmaceutical organizations in social and charitable projects is an important and sometimes motivational advantage for the PhS in choosing a job.

**Study limitations.** Although the sample size indicates a representative nature of the study, its structure was not uniform across the regions of Ukraine. In addition, respondents from the annexed Autonomous Republic of Crimea and the occupied districts of Luhansk and

Donetsk regions were not represented. With low Internet activity, 50+ PhSs took an insufficient part in the survey. Thus, the general results of the survey should not be extrapolated to specific regions of Ukraine.

**Prospects for further research.** Given that in Ukraine the participation of PhOs in various social and charitable projects is becoming more widespread, an omnibus study on the attitude of PhSs to such activities of employers and their personal participation in these projects is promising. In addition, it is interesting, in our opinion, to study the influence of various motivational factors on job satisfaction of PhSs.

## 6. Conclusions

1. An online survey of 508 pharmaceutical professionals, conducted in a Google Form has allowed us to establish the features of current motivational approaches used today in pharmaceutical organizations and the attitude of respondents to them.

2. It has been found that such motivational tools as trainings (innovative form of education) (55.1 %), as well as material forms of incentives (73.2 %) are widely used. At the same time, the main topics of the trainings are regarding the professional aspects of activity.

3. An important factor in the life of a pharmaceutical organization is its social and charitable work, which forms a positive attitude towards it on the part of pharmaceutical professionals, and sometimes serves as a motivational advantage in choosing a place of work.

## Conflict of interest

The authors declare that they have no conflicts of interest.

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