

Volunteer activity of pharmacists and its role in the conditions of Russia's military aggression against Ukraine

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Abstract

Objective

The aim of our study was to research the engagement and personal contribution to volunteering of pharmaceutical professionals and students in conditions of Russian-Ukrainian war.

Methods

An anonymous online questionnaire-based survey was conducted among Ukrainian pharmaceutical professionals and students (n = 517; approximate response rate - 40%). The analyzed period was February-April 2023. Statistical analysis was performed using a spreadsheet Microsoft Excel.

Results

The results of the questionnaire survey have shown that almost two thirds of respondents (63.45%) were engaged in volunteer activities. The most relevant sources of information about volunteering were pages, channels and groups of volunteer organizations in social networks (22.21% of responses), information from friends, colleagues, relatives, etc., related to volunteering (21.86%), various announcements in social networks (20.83%). Leaders among social networks were Telegram (28.32%), Instagram (28.05%) and Facebook (23.58%). The main motives for volunteering were the desire to help the army (43.57%) and internally displaced persons (25.73%), and the main forms of participation in volunteer activities were the collection of funds, clothes, household items, food and medicines (24.31%), transfer of funds for the needs of the army (17.36%) and for volunteer activities (17.26%).

Conclusion

The role of volunteering in the conditions of the Russian-Ukrainian war among pharmacists and pharmaceutical students was studied and understood.

Introduction

Volunteering is a charitable activity carried out by individuals on a non-profit basis for the well-being and prosperity of communities and society as a whole. At the same time, a volunteer is a natural person who voluntarily carries out socially oriented non-profit activities by providing volunteer assistance.^[1]

In Ukraine, during the Russia's military aggression (since 2014, and especially after 2022), the volunteer movement, in addition to the above-mentioned directions, plays a huge role in providing various needs of the front zone, in particular, collecting and distributing humanitarian aid, providing medical care to the wounded and sick, and providing of social and psychological rehabilitation.

There are a lot of studies about volunteering interests and activity of pharmacists and pharmacy students, such as: local and global volunteer opportunities for pharmacists to contribute to public health initiatives and the challenges of community service^[2-4], international volunteer experiences of pharmacists in different areas of the world^[5], the experiences of pharmacy students volunteering during the COVID-19 pandemic and the perceived impact of volunteering on experiential learning and development of core pharmacy skills.^[6]

Since the study of the professional contribution and involvement of Ukrainian pharmaceutical specialists and pharmacy students in volunteer activities in wartime conditions was not conducted, this determined the relevance of our study.

Materials and methods

Questionnaires, mathematical statistics, generalization, and interpretation of results were the methods used in the research.

During the study, anonymous questionnaire survey of Ukrainian pharmaceutical specialists and pharmacy students was conducted regarding their involvement in volunteer activities in the conditions of Russia's military aggression.

The questionnaire for the survey was online, developed using the Google Form and contained 24 questions, which collected data about age, sex, activity of the respondent, educational level, position and work experience, involvement in volunteer activities and motivation to take part in different volunteer events etc. Participation in the study was voluntary and anonymous. The term of the survey in Ukraine was February-April 2023. Statistical analysis was performed using a spreadsheet Microsoft Excel.

During the questionnaire survey we have received 526 (517 qualitatively completed) questionnaires from the respondents. The response rate was approximately 40%, as a questionnaire was mainly sent specifically to institutions where representatives of the target audience work and study (pharmaceutical specialists of pharmacies, students/employees of pharmaceutical faculties of universities and colleges) or personalized to specialists. However, it is quite clear that the response rate partly depended on the circumstances caused by the war (lack of electricity and Internet, etc.), so the respondents did not always have the opportunity to answer the questions of the questionnaire.

Thus, according to the results of the survey, the largest number of respondents lived in Lviv region (Western Region) (n=231; 44.68%), almost 10% of respondents lived in Zaporizhzhia region (Southern Region), about 6% each in Rivne and Chernivtsi regions (Western Region), and more than 5% in Volyn region (Western Region) (Table 1). Comparative characteristics has showed that a small number of respondents changed their place of residence because of beginning of the war, in particular, 13 respondents moved to the Western Region, 5 to the Northern one and 3 to the Central Region. As for the regions, the biggest changes took place in Lviv region, as the number of respondents increased to 246 (increased by 15), and in Zaporizhzhia region it decreased to 35 (decreased by 14). It was also found that 23 respondents (4.4%) left Ukraine after the beginning of the full-scale invasion of Russia. The largest number of them (9) at the time of the survey were in Poland, 3 - in Germany, 2 - in Sweden, and the rest of respondents were in Estonia, Canada, Belgium, Austria, Moldova, the United States of America, Hungary, Czech Republic, and Montenegro (1 respondent per each country).

Table 1. Comparative regional characteristics of respondents

Region	The number of respondents who lived before		The number of respondents who lived after	
	full-scale Russian invasion of Ukraine			
	n	%	n	%
Vinnitsia region	4	0,8	3	0,6
Volyn region	29	5,6	27	5,2
Dnipropetrovsk region	16	3,1	18	3,5
Donetsk region	13	2,5	3	0,6
Zhytomyr region	1	0,2	1	0,2
Transcarpathian region	6	1,2	3	0,6
Zaporizhzhia region	49	9,5	35	6,8
Ivano-Frankivsk region	12	2,3	13	2,5
Kyiv region	8	1,5	7	1,4
Kyiv city	21	4,1	26	5,0
Kirovohrad region	4	0,8	3	0,6
Luhansk region	2	0,4	-	-
Lviv region	231	44,7	246	47,6
Mykolaiv region	10	1,9	4	0,8
Odesa region	2	0,4	3	0,6
Poltava region	5	1,0	7	1,4
Rivne region	34	6,6	35	6,8
Sumy region	-	-	1	0,2
Ternopil region	2	0,4	3	0,6
Kharkiv region	13	2,5	6	1,2
Kherson region	10	1,9	2	0,4
Khmelnyskyi region	7	1,4	8	1,5
Cherkasy region	5	1,0	7	1,4
Chernivtsi region	33	6,4	33	6,4
Total	517	100	494	100

The respondents were of different ages, the minimum age was 17 and the maximum was 73. The average age of the respondents is 30 years. The majority of respondents were women (n=472; 91.3%). The rest of the interviewees were men (n=45; 8.7%).

Among the pharmacy students (229 respondents), the largest number studied on master's of pharmacy program (206 respondents, 90.0%). The rest of the respondents were bachelors of pharmacy (11; 4.8%), junior bachelors (6; 2.6%) and doctors of philosophy (6; 2.6%).

In general, according to the results of the survey, pharmacy students studied at 13 higher education institutions (HEI) (Table 2). Among HEI, Danylo Halytsky Lviv National Medical University was the leader, where 78 respondents studied (more than a third, 34.06%).

Zaporizhzhia State Medical and Pharmaceutical University was second in terms of the number of students (62 respondents, 27.07%). Also, a relatively large number of respondents studied at Lesya Ukrainka Volyn National University (25 respondents, 10.92%) and National Pharmaceutical University (21 respondents, 9.17%). Majority of students studied on full-time (daytime, evening) form of education (139 respondents, 60.7%), while 90 respondents (39.3%) studied part-time.

Table 2. Higher education institutions, in which the respondents studied

№	HEI	The number of respondents	% of respondents
1	Danylo Halytsky Lviv National Medical University	78	34,06
2	Zaporizhzhia State Medical and Pharmaceutical University	62	27,07
3	Lesya Ukrainka Volyn National University	25	10,92
4	National Pharmaceutical University	21	9,17
5	Bukovinian State Medical University	14	6,11
6	Private higher education institution "Lviv medical university"	12	5,24
7	Lviv Medical College of Postgraduate Education	3	1,31
8	Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies of Lviv	3	1,31
9	Ivano Frankivsk National Medical University	2	0,87
10	Lviv Medical College "Monada"	3	0,87
11	O.O. Bogomolets National Medical University	2	0,87
12	Lviv Polytechnic National University	2	0,87
13	I. Horbachevsky Ternopil National Medical University	2	0,87
Total		229	100

When indicating their type of activity, the respondents had the opportunity to indicate several options and were distributed as follows (Table 3): more than a third of the respondents were practical employees of the pharmaceutical sector (202; 39.07%), slightly more than 1/5 were students (121; 23.4%), and about 1/5 of the respondents (100; 19.34%) combined study and work in a pharmacy. A little more than 7% of respondents worked in HEI (40 people). More than 4% of the respondents were interns who simultaneously work in pharmacies or other pharmaceutical institutions (23 people). Also among the respondents were postgraduate students and unemployed persons, as well as those who combine 2 or more types of activities.

Table 3. Distribution of respondents by type of their activity

№	Type of activity	The number of respondents	% of respondents
1	Practical employee of the pharmaceutical sector	202	39,07
2	Student	121	23,40
3	Student and practical employee of the pharmaceutical sector	100	19,34
4	Worker of HEI	40	7,74
5	Intern and practical employee of the pharmaceutical sector	23	4,45
6	Intern	12	2,32
7	Unemployed	12	2,32
8	Postgraduate student and worker of HEI	3	0,58
9	Postgraduate student and practical employee of the pharmaceutical sector	2	0,39
10	Postgraduate student and practical employee of the pharmaceutical sector and worker of HEI	1	0,19
11	Practical employee of the pharmaceutical sector and worker of HEI	1	0,19
Total		517	100%

The next parts of the questionnaire concerned the attitude towards volunteering and the direct participation of pharmaceutical specialists in various types of volunteer assistance.

Results

It has been clarified, almost ¾ of the respondents (74.66%; 386) noted that among their relatives / loved ones / friends they have military personnel, paramedics, and participants in the war caused by the aggression of the Russian Federation. And more than a third of the respondents (40.04%; 207) noted that they have relatives / friends living at the occupied territories.

The concept of "volunteer activity" is known to almost all respondents. Only 5 people (0.97%) indicated that they had no idea about volunteering. The majority of respondents (42.94%; 222) indicated that they have friends who are involved in volunteering. Almost a third of the respondents (28.82%; 149) noted that they know about the volunteering, based on personal experience. A little less than a third (27.27%; 141) indicated that they have a general knowledge about the concept of volunteering.

As for participation in volunteer activities, more than half of the respondents (55.71%, 288) indicated that they engaged in volunteer activities occasionally. A little more than a third of the respondents (36.56%, 189) indicated that they practically did not have the opportunity to volunteer during the war, and only 40 experts (7.74%) said that they have a permanent relationship with volunteering. Volunteer certificate had 14 respondents (2.71%).

Among the main sources of information about volunteering (multiple-choice question type), respondents most often noted: pages, channels and groups of volunteer organizations in social networks (22.21%; 193 of answers), information from friends, colleagues, relatives etc. related to volunteering (21.86%; 190), various announcements in social networks (20.83%; 181). Information from volunteers (12.77%; 111), from the websites of volunteer and non-governmental organizations (12.66%; 110), television and radio (6.33%; 55), and HEI volunteer headquarters (2.88%; 25) was also quite popular.

More than ¾ of the respondents (84.76%; 278) used social networks to obtain information about volunteering. The leaders among social networks (multiple-choice question type), according to respondents' answers, were: Telegram (28.32%; 209), Instagram (28.05%; 207) and Facebook (23.58%; 174). Viber was less popular (18.16%; 134), while Twitter was the least popular (1.8%; 13).

As the main reasons for volunteering (type of question with answers) (Table 4), the respondents indicated the desire to help the army (43.57%) and the desire to help internally displaced persons (25.73%).

As the reasons for volunteering activity (multiple-choice question type) (Table 4) more than 2/5 of answers were about a desire to help the army (43.57%; 298), the fourth part - a desire to help internally displaced persons (25.73%; 176). The feeling of social significance was noted by more than 10% (72) of answers. Receiving moral satisfaction from the gratitude of people to whom assistance was provided was indicated by more than 8,77% (60) of answers. Acquisition of useful social and practical skills was noted in 7.6% (52) of answers, and more than 2,05% (14) of answers indicated self-expression. Other reasons cited by respondents included the desire to be useful, to help people, to speed up the victory, to help medical professionals on the front lines, etc.

Table 4. Reasons for volunteering activity

№	Reasons for volunteering activity	The number of respondents	% of answers
1	A desire to help the army	298	43,57
2	A desire to help internally displaced persons	176	25,73
3	A feeling of social significance	72	10,53
4	Receiving moral satisfaction from the gratitude of people to whom assistance was provided	60	8,77
5	Acquisition of useful social and practical skills	52	7,60
6	Self-expression	14	2,05
7	Other	12	1,75
Total amount of the answers		684	100%

Regarding the form of participation in volunteer work (multiple-choice question type) (Table 5), respondents most often indicated: participation in the collection of funds, clothes, things of daily use, food and medicines (24.31% of answers; 238); transfer of funds for the needs of the army (17.36%; 170); transfer of funds for volunteer activities (17.26%; 169); sorting of medicines and medical products (9.6%; 94); weaving camouflage nets for the military (8.78%; 86); providing housing for temporarily displaced persons (6.33%; 62) and cooking for military personnel or temporarily displaced persons (6.03%; 59). A small part of the respondents also indicated work in the volunteer hub (3.06%; 30), transportation of volunteer aid to the front-line zone (2.35%; 23), manufacture of medicines for the military (1.84%; 18) and blood donation (1.74%; 17).

Table 5. Form of participation in volunteer work

№	Reasons for volunteering activity	The number of respondents	% of answers
1	Participation in the collection of funds, clothes, things of daily use, food and medicines	238	24,31
2	Transfer of funds for the needs of the army	170	17,36
3	Transfer of funds for volunteer activities	169	17,26
4	Sorting of medicines and medical products	94	9,6
5	Weaving camouflage nets for the military	86	8,78
6	Providing housing for temporarily displaced persons	62	6,33
7	Cooking for military personnel or temporarily displaced persons	59	6,03
8	Work in the volunteer hub	30	3,06
9	Transportation of volunteer aid to the front-line zone	23	2,35
10	Manufacturing of medicines for the military	18	1,84
11	Blood donation	17	1,74
12	Participation in the care of the wounded in the hospital	8	0,82
13	Delivery of humanitarian goods from abroad	2	0,2
14	Work in the pharmacy near the military hospital	2	0,2
15	Making trench candles	1	0,1
Total amount of the answers		979	100%

Discussion

In this study, we have decided to research and understand the role of volunteering in the conditions of the Russian-Ukrainian war among pharmaceutical specialists and pharmaceutical students. The results of the study have shown that only more than a third of the respondents did not have the opportunity to engage in volunteering, and the rest paid attention to it, which corresponds to the "ten-star pharmacist" paradigm, namely the implementation of the tenth professional role of the pharmacist - the initiator of positive changes.^[7]

It is also important to note that the data obtained regarding the most relevant sources of information on volunteering (websites, pages, channels and groups of volunteer or-

ganizations in media, information of friends, colleagues, relatives, etc. related to volunteering, various announcements in social networks) are correlated with the results of another study, according to which the largest share of respondents received information about volunteering opportunities through online resources, platforms and volunteer chats.^[8]

According to the research of Kragt D. and Holtrop D.^[9], the main reason for volunteering in peaceful conditions was an emotional attitude to the event, and the second most important reason was that volunteering was enjoyable. Another study (Güntert S. et al)^[10] indicated three reasons for volunteering - the desire to gather with other people, to help and to do something useful. According to the results of our research, respondents identified specific issues as the main reasons for volunteering - the desire to help the army and internally displaced persons, which is a consequence of an emotional attitude to the course of the war. However, receiving moral satisfaction was in fourth place after a sense of social significance, gain of useful social skills was in fifth place, the desire to simply be useful and help people – among other minor reasons.

Volunteering, as an extremely important component of civil society in peacetime, has many directions, including social care and protection of the most vulnerable categories of the population, assistance in matters of economy, culture, medicine, ecological protection of the environment, etc..^[11-12] However, the war changes the vector of volunteer activity, as was evidenced by the results of our research, towards the collection of funds, clothing, everyday items, food and medicines, as well as the transfer of funds for the needs of the army and for charity.

Conclusions

1. On the basis of an anonymous questionnaire survey (using Google Form) of 517 Ukrainian pharmaceutical specialists and pharmacy students, who represented all regions of Ukraine and 12 other states, their involvement in volunteer activities under the conditions of full-scale Russian armed aggression against Ukraine was studied.
2. It was found that only 7.74% of experts had a permanent relationship to volunteering during the war, 55.71% - were engaged in volunteering from time to time, and 36.56% - did not have the opportunity to volunteer.
3. It was shown that the most relevant sources of information regarding volunteering were three sources of information, namely: pages, channels and groups of volunteer organizations in social networks (22.21% of responses), information from friends, colleagues, rel-

atives, etc., related to volunteering (21.86 %), various announcements in social networks (20.83%). The leaders among social networks (multiple choice question) were: Telegram (28.32%), Instagram (28.05%) and Facebook (23.58%).

4. As the main reasons for volunteering the respondents identified the desire to help the army (43.57%) and internally displaced persons (25.73%), and the main forms of participation in volunteer activities were the collection of funds, clothes, everyday items, food and medicine (24.31%), transfer of funds for the needs of the army (17.36%) and for volunteer activities (17.26%).

Limitations

As with the majority of studies, the design of the current study is subject to limitations, as following: 1) sampling bias – the limited ability to gain access to the respondents from all regions of Ukraine does not fully reflect the general situation, as volunteer activities and motivations may vary across different regions affected by the war; 2) response rate and representativeness – depends on different perspectives or experiences of the respondents as well as circumstances caused by the war and opportunity to get the online questionnaire and answer the questions; 3) internal and external factors, such as personal beliefs, socio-economic status, institutional support and, of course, the war conditions, could impact the study's internal validity and interpretation of results.

Conflict of Interests

Authors disclose no conflict of interest.

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