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Donating Blood and Its Components: A Study of Motivational Factors and Challenges Among University Students in Poltava, Ukraine, During War

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Abstract

Background

Donated blood has been an important strategic resource ever since the full-scale invasion of Ukraine. While university students are crucial global reserves for the blood donor movement, they remain impeded by a lack of information and myths around blood donation. This study analyzes the awareness of the medical and non-medical students in Poltava during the war regarding blood donation as well as their personal experiences and motivational factors.

Methods

A cross-sectional study was carried out from October 20 to November 15, 2025, and involved the completion of the anonymous Google Forms survey by 437 students in four institutions of higher learning in Poltava. The participants were grouped into two groups: medical students (n = 192) and non-medical students (n = 245). Analysis (chi-square test) was performed.

Results

The previous donation experience was only observed in 21% of respondents and medical students reported being more active (38.5%) than non-medical students (7.3%; $p < 0.00001$). On the other hand, medical students possessed a significantly greater extent of knowledge concerning blood donation locations (83.9% of participants compared to 40.4%; $p < 0.00001$) and their own blood types. The most common barriers were described as medical contraindications (74.1%), lack of knowledge (71.6%) and fear of needles (54.9%). The primary motivator for 78.3% of donors was a wish to assist wounded soldiers and civilians in war. Patriotic duty was mentioned as one of the strongest motivators by 68.6%, among all respondents.

Conclusions

Although Poltava's student youth share a favorable attitude towards such donation, their participation is inhibited by a lack of information, especially among non-medical students. The study emphasizes the critical need to ensure the integration of blood donation education within university curricula under national defense priorities and the engagement of social media for directed promotional activities.

Introduction

Blood is an essential element of the human body, and its deficiency frequently occurs in various medical conditions such as injuries, bleeding, cancer, etc. Despite significant advancements in medicine and

technology, artificial synthesis of blood is still impossible, which makes donation the only way to provide blood and its components.

Since the onset of the full-scale Russian invasion of Ukraine, donated blood has emerged as a resource equally critical as weapons or ammunition, playing a crucial role in saving both military personnel and civilians who are injured [1, 2]. University student youth are the most mobile, patriotic and physically fit segment of the society. Students are the key reserve for strengthening the donor movement worldwide [3, 4]. The vast majority of students meet the basic donor criteria (age 18 and above, required weight), and their general health often allows them to become regular donors. However, the high potential of students is often limited by the lack of structured information, widespread myths and insufficient understanding of the critical importance of their contribution [5, 6–8]. Therefore, analyzing and raising awareness among young individuals about blood donation during wartime is not only important but also an urgent societal necessity.

The implications of the present study are emphasised by an immediate shortage of blood sources which has resulted from the dramatic increase in casualties from on and off the battlefield among soldiers and civilians who have suffered from constant missile attacks, so it is strategically necessary to involve the most active and efficient segments of the Ukrainian population in blood donation to renew basic supplies.

The aim: to improve the education for university students of Poltava about issues of blood donation and its components, and facilitate greater participation in blood donation activities during a time of war.

The objectives of the study were: 1) to evaluate the present level of blood donation awareness amongst students; and 2) to ascertain personal experiences of students from university students from Poltava (medical and non-medical schools): also, the motivating factor and impediments to blood donation for students from Poltava during the war conflict.

Materials and Methods

In order to achieve the set goal, an anonymous survey was prepared using Google Forms. The questionnaire consisted of four sections: initial demographic inquiries (including gender, age, the university the respondent attends, faculty, course of study, blood type, and personal experiences regarding blood donation or its components), questions directed at individuals who have donated blood, inquiries for those who have never donated in their lives, and a series of questions aimed at evaluating students' awareness, motivation, fears, as well as their suggestions for promoting information and encouraging future donors. Before taking the survey, all participants received comprehensive information about the purpose and procedure of the study and provided consent to participate, which was included in the questionnaire.

Participants were required to be students from Poltava Universities and participation was voluntary. The primary exclusion criterion specified was being under 18 years of age.

A cross-sectional study was carried out through an anonymous questionnaire survey of 450 students of four higher educational institutions in Poltava, conducted between October 20, 2025, and November 15, 2025. After excluding the underage respondents and incomplete responses, the final analysis included the questionnaires of 437 higher education applicants. This sample size was deemed adequate for the research.

The gender distribution by respondent was 154 (35.2%) men and 283 (64.8%) women. The average age of participants was calculated at 20.6 ± 0.10 years, with age categories distributed as follows: students aged 18–20 years comprised 228 (52.2%), while those over 20 years amounted to 209 (47.8%).

The study involved 192 (43.9%) students from Poltava State Medical University (PSMU), 113 (25.9%) from Poltava V.G. Korolenko National Pedagogical University (PNPU), 75 (17.2%) from Poltava State Agrarian University (PSAU), and 57 (13%) from National University «Yuri Kondratyuk Poltava Polytechnic» (NUPP) (Fig. 1).

Depending on their field of study, participants were categorized into two distinct groups: I (n = 192) – medical students studying at the PSMU, male/female ratio – 81 (42.2%) / 111 (57.8%), average age – 21.2 ± 0.14 years, this group included a predominance of senior students (years 4–6) totaling 145 (75.5%), while junior students (years 1–3) accounted for 47 (24.5%).; II (n = 245) – non-medical students from PNPU, PSAU and NUPP, male/female ratio – 73 (29.8%) / 172 (70.2%), average age – 20.1 ± 0.17 years. Senior (4–5) and junior (1–3) year students participated in the survey almost equally: 109 (44.5%) and 136 (55.5%), respectively.

Based on their blood donation experiences, respondents from both groups were further divided into subcategories: IA (n = 74) – medical students who at least once in their lives were donors of blood or its components; IB (n = 118) – medical students who have never donated blood; IIA (n = 18) – students not related to the medical field who at least once in their lives were donors of blood or its components; IIB (n = 227) – students not related to the medical field who have never donated blood.

The results gathered from the survey were compiled in an Excel spreadsheet for subsequent analysis and visualization purposes. A chi-square test, calculated from an online calculator available at https://www.socscistatistics.com, considering findings statistically significant when $p < 0.05$, was used to assess the reliability coefficient of the indicators investigated in statistical analysis.

Results and discussion

The most predominant blood type among students surveyed was A(II) Rh«+» found among 112 subjects, which is 25.6% of the sample. This is between 53 (27.6%) belonging to group I and 59 (24.1%) belonging to group II. These results correspond to findings of earlier research of Ukrainian scientists, which showed that the A(II) phenotype was the most widely expressed in Ukraine, with D antigen present in 86.05% of the population [9]. After this, blood type O(I) Rh«+» was the second most frequently reported among blood types in each of the two groups with 98 respondents, or 22.4% of those studied,

recognizing it. The third most frequent blood group was the B(III) Rh«+» blood group (51 respondents (11.7%)). Next in frequency was the A(II) Rh «-» group, which was reported by 44 people (10.1%). In fifth place was O(I) Rh«-», found in 26 respondents (5.9%), closely followed by B(III) Rh«-» at a prevalence of 23 respondents (5.3%) and AB(IV) Rh«+» at 21 respondents (4.8%).

The least common blood type was AB(IV) Rh «-», which only four individuals (0.9%) reported having. The differences in blood type prevalence between comparison groups were not statistically significant (p 0.05). A comprehensive breakdown of blood group frequencies among the surveyed students based on their field of study is provided in Table 1.

It's noteworthy that 58 respondents (13.3%) were unable to specify their blood type due to lack of knowledge. Interestingly, a higher proportion – 51 students (20.8%) – from the second non-medical group were unaware of their blood type compared to just seven medical students (3.6%) from the first group, resulting in, $Xi^2(1, N = 437) = 27.6$, p 0.00001. This suggests that individuals pursuing medical education exhibit greater awareness regarding their health and bodily knowledge.

Table 1
Frequency of blood types among surveyed students according to the AB0 and Rh systems

Blood type	I (n = 192) medical	II (n = 245) non-medical	Total (n = 437)	p-value
O(I) Rh «+»	51 (26.6%)	47 (19.2%)	98 (22.4%)	⍰0.05
O(I) Rh «-»	11 (5.7%)	15 (6.1%)	26 (5.9%)	⍰0.05
A(II) Rh «+»	53 (27.6%)	59 (24.1%)	112 (25.6%)	⍰0.05
A(II) Rh «-»	22 (11.5%)	22 (9%)	44 (10.1%)	⍰0.05
B(III) Rh «+»	26 (13.5%)	25 (10.2%)	51 (11.7%)	⍰0.05
B(III) Rh «-»	12 (6.3%)	11 (4.5%)	23 (5.3%)	⍰0.05
AB(IV) Rh «+»	8 (4.2%)	13 (5.3%)	21 (4.8%)	⍰0.05
AB(IV) Rh «-»	2 (1%)	2 (0.8%)	4 (0.9%)	⍰0.05
Unknown	7 (3.6%)	51 (20.8%)	58 (13.3%)	⍰0.00001*

**Significant p-value (⍰0.05).*

First and foremost, it is important to highlight that out of the higher education students surveyed, 21% (92 students) reported having donated blood at least once in their lives. The results confirm previous research among students around the world, among the most comparable case in Qatar where we obtain a 15% [10] donation rate whereas, Spain and Portugal (31.3%) [6] and Middle East, Africa, India and Pakistan has another average of 22.7% [3]. On the contrary, a total of 79% (345 respondents) mentioned they had never donated blood or its products (Table 2).

Furthermore, knowledge of blood donation seems to be strongly influenced by educational background, for example, students studying the medical field (e.g., future doctors or nurses) had a higher level of knowledge regarding blood donation than students studying the non-medical field. This observation is consistent with a cross-sectional study covering 12,606 students living in 16 countries [3] (Algeria, Bahrain, Egypt, Ghana, India, Iraq, Jordan, Libya, Morocco, Pakistan, Palestine, Saudi Arabia, Sudan, Syria, Turkey, and Yemen). While awareness of blood donation was significantly higher among medical students, this did not translate to significantly more donations compared with other student populations.

Meanwhile in Ukraine, according to the results of our study, medical university students turned out to be significantly more active donors, compared to young people of the same age who receive non-medical education at other universities in Poltava city. At least once in their lives, 74 (38.5%) medical students were donors of whole blood or its components (plasma, platelets), while only 18 (7.3%) students of other specialties did so from the moment of their majority, Xi^2(1, N = 437) = 63.02, p□0.00001 (Table 2).

Table 2
Own experience depending on their medical or non-medical field of education.

Blood donation	**I (n = 192) medical**	**II (n = 245) non-medical**	**Total (n = 437)**	**p-value**
Own experience of donation				
Donors	74 (38.5%)	18 (7.3%)	92 (21%)	□0.00001*
Non-donors	118 (61.5%)	227 (92.7%)	345 (79%)	
Knowledge regarding blood donation sites				
Know	161 (83.9%)	99 (40.4%)	260 (59.5%)	□0.00001*
Don't know	31 (16.1%)	146 (59.6%)	177 (40.5%)	
Promotion of donation				
Sufficient	55 (28.6%)	41 (16.7%)	96 (21.9%)	□0.05*
Partial	80 (41.7%)	92 (37.6%)	172 (39.4%)	
Insufficient	57 (29.7%)	112 (45.7%)	169 (38.7%)	
**Significant p-value (□0.05).*				

According to the survey findings, young medical university students exhibited a significantly greater awareness of donation issues compared to their peers in non-medical disciplines. Specifically, 161 (83.9%) students from PSMU are aware of locations in Poltava where blood and its components can be donated, whereas only 99 (40.4%) students from other universities possess this knowledge, with results indicating Xi^2(1, N = 437) = 84.3, p□0.00001. Among future medical professionals, 57 (29.7%) express that blood donation and its components are insufficiently promoted among the youth, while 80 (41.7%) feel it is somewhat promoted; conversely, one-third of respondents are fully satisfied with the current level of promotion of donation initiatives. The perspective among non-medical students presents a stark contrast: 112 (45.7%) have not encountered any information regarding blood donation and its components; additionally, 92 (37.6%) consider the existing promotion efforts to be partially adequate, and only about one-sixth of those surveyed – 41 individuals (16.7%) – report having sufficient information on the subject, as indicated by, Xi^2(2, N = 437) = 14.6, p□0.05 (Table 2).

According to our research, university students from our city are poorly educated on the underlying concepts of blood donations. It should be noted that the medical degree-seeking students showed a higher degree of awareness than their non-medical degree-competing individuals, which is consistent with the findings of Eltewacy et al. [3] and Martínez-Santos et al. [6]. This scenario emphasizes the importance of developing ways to improve the ability of parents and students to share information about blood donation and its components and dispel common myths in the most adverse wartime conditions.

The primary hindrances that have held a youth participation in the donor movement are as per student survey participants identified. We have identified four key barriers to donations for the student population in Poltava based on the survey results. The majority of reasons for these obstacles was due to medical contraindications related to health and lack of knowledge, as revealed by 324 (74.1%) respondents and 313 (71.6%) respondents, surveyed data, respectively. Fear of needles was also the second major barrier, with 240 students (54.9%) recognized as having experienced this, and 116 (26.5%) university applicants in Poltava also reported that time being a barrier of donating. No statistically significant differences were observed between groups I and II of the respondents ($p > 0.05$) (Fig. 2). The findings align closely with earlier U-Report digest surveys conducted by Ukrainian researchers during the second quarter of 2025 [5].

The motivational elements identified by our participants accurately capture the prevailing trends among youth and the current circumstances in Ukraine. A primary aspect is the perception that donating blood symbolizes contemporary patriotism and support for the military, with 300 respondents (68.6%) asserting that this motivation is likely to be highly effective in engaging students in the donor movement. In addition, 246 (56.3%) people advocate that the donors be rewarded or incentive system for their donation using special discounts, certificates, and/or gifts. Half of those queried feel it is useful to produce short videos presenting some participants who have been saved by blood donations, to share stories and positive stories of young recipients through social media and to engage famous bloggers, artistes and athletes to use their platforms to campaign for donations. Futhermore, about one-third of respondents (130 individuals or 29.7%) suggested organizing a special challenge titled “Donate blood – spread kindness” aimed at encouraging student participation in blood donation. No statistically significant difference was observed between the two groups of respondents ($p > 0.05$) (Fig. 3).

It would be good to note that the most preferred manner of providing the information on donation, planned donation campaigns, and general information disseminating about dispelling the stigma has been in the universities at which the respondents studied. In particular, 167 (87.9%) of the respondents from Group I in medical education and 175 (71.4%) from Group II reported this preference. Also, a large majority of the students – 142 (73.9%) from medical education and 161 (65.7%) from other subjects – feel that they should also use social media platforms to disseminate that information. By contrast, only around half of the respondents claimed to want to be given information on the donation by friends or acquaintances, with 100 (52.1%) medical students and 115 (46.9%) non-medical students doing so (Fig. 4).

Our study showed that regardless of education level, students wanted to help people who were in desperate situations, like being injured in a conflict as well as targeted missiles directed at civilians in Ukraine. Interestingly, medical students expressed a higher intention to donate in the future. This may be caused by the limited awareness of non-medical students regarding blood donating issues. Although the perception of blood donation among students overall is favorable, actual participation rates are low, and statistically, a significant difference is noted in this variable between students in medical fields and those from those in nonmedical domains. As a result, focused education interventions and improved availability of blood donation opportunities are critical to encouraging the process of blood donation among students and also help establish a good blood donating culture.

Characteristics of the subgroups of donors (IA and IIA):

When evaluating the subgroups of donors, several socio-demographic characteristics were observed. A notable trend among medical donors was the predominance of older students, with a statistically significant disparity in educational backgrounds (medical versus non-medical) across different universities. Specifically, 58 donors (78.4%) who were medical students were aged over 20 years, while no age variation was noted among donors from non-medical fields, $Xi^2(1, N = 92) = 5.89$, p□0.05 (Table 3). The reason for this phenomenon might be an increased awareness of the importance and critical nature of blood donation that is developed as one gets older with studying in a medical institution – this perception that this age group is not met – unlike non-medical students that are much more mature. Such poor levels of information about blood donation problems are perhaps why these donors do not participate in the process. Similar gender distributions were observed in medical versus non-medical donor and did not differ between the groups (p□0.05). In terms of male participants, 51 donors (55.4%) were from medical university and 8 from other institutions. On the other hand, there were 41 women donors (72.8%), 31 were medical university and 10 were of other universities (Table 3).

Of the total surveyed respondents, 31 donors (33.7%) donated blood only once, 50 donors (54.3%) gave blood at least twice to five times, and 11 regular donors (12%) donated blood more than five times. No considerable difference was found in the frequency of donations among the medical or non-medical educational institutions (p□0.05) (Table 3). The donors we assessed donated mainly whole blood, with less of a number of constituents. A total of 83 respondents were of the universities of Poltava (90.2%), that had given whole blood. Fourteen (15.2%) of student donors reported donating plasma, and 18 (19.6%) stated that they donated platelets. And 22 (23.9%) of these people had already given whole blood and its components at different stages of their adult lives. For a comprehensive overview of the donation types among the surveyed medical and non-medical students, please refer to Table 3.

Table 3
Characteristics of subgroups of blood donors among students of Poltava depending on medical or non-medical areas of education.

Donors	IA (n = 74) medical	IIA (n = 18) non-medical	Total (n = 92)	p-value
Age				
18–20 years	16 (21.6%)	9 (50%)	27 (29.3%)	0.05*
20 years	58 (78.4%)	9 (50%)	67 (72.8%)	
Gender				
Male	43 (58.1%)	8 (44.4%)	51 (55.4%)	0.296
Female	31 (41.9%)	10 (55.6%)	41 (44.6%)	
Number of donations				
Once	21 (28.4%)	10 (55.6%)	31 (33.7%)	0.085
2–5 donations	43 (58.1%)	7 (38.9%)	50 (54.3%)	
5 donations	10 (13.5%)	1 (5.5%)	11 (12%)	
Donation type				
Only whole blood	52 (70.3%)	14 (77.8%)	66 (71.7%)	-
Only plasma	3 (4.1%)	1 (5.55%)	4 (4.35%)	
Only platelets	4 (5.4%)	-	4 (4.35%)	
Whole blood and plasma	4 (5.4%)	1 (5.55%)	5 (5.4%)	
Whole blood and platelets	8 (10.8%)	1 (5.55%)	9 (9.8%)	
Whole blood, plasma and platelets	2 (2.7%)	1 (5.55%)	3 (3.3%)	
Plasma and platelets	1 (1.3%)	-	1 (1.1%)	
Degree of anxiety before the procedure				
None	34 (45.9%)	8 (44.4%)	42 (45.7%)	0.216
A little	31 (41.9%)	5 (27.8%)	36 (39.1%)	
Very	9 (12.2%)	5 (27.8%)	14 (15.2%)	
Amount of information received before the procedure				
Sufficient	68 (91.9%)	14 (77.8%)	82 (89.1%)	0.084

**Significant p-value (0.05).*

Donors	IA (n = 74) medical	IIA (n = 18) non-medical	Total (n = 92)	p-value
Partially	6 (8.1%)	4 (22.2%)	10 (10.9%)	
Insufficient	0	0	0	
Feelings after the procedure				
Euphoria	17 (23%)	8 (44.4%)	25 (27.2%)	0.065
As usual	47 (63.5%)	6 (33.3%)	53 (57.6%)	
Slightly unwell	10 (13.5%)	4 (22.2%)	14 (15.2%)	
Bad	0	0	0	
**Significant p-value (0.05).*				

Before participating in blood donation, the student donors we surveyed generally exhibited a calm demeanor. Forty-two respondents reported experiencing no anxiety whatsoever and 36 (39.1%) mild apprehension while waiting for the donation. Meanwhile, 14 (15.2%) were highly worried ($p > 0.05$) but no statistically significant difference in the different study profiles to indicate a statistical significance (Table 3).

In contrast, there were 10 (10.9%) individuals among those who considered their information inadequate (none choosing insufficient information as in a respondent's decision). This is indicative of a prudent young person's attitude towards getting involved in the donation journey. Again, there were no statistically significant variances between different categories of students studying according to fields of study ($p > 0.05$) (Table 3).

The questionnaire response was informative on the sense of comfort of student donors for those who fulfilled the donation process conducted. None felt sick afterward; 25 (27.2%), who felt euphoric about having helped save a life, said they had contributed to saving it. Over half, 53 (57.6%) of those surveyed characterized their feelings as normal post-donation, with 14 (15.2%) reporting mild discomfort. There was no evidence for a statistically significant difference across training profiles on their feelings about giving post-donation (Table 3).

The students also believed they were compelled to be donors out of their desire to help wounded soldiers or civilians during the massive invasion of Ukraine (this highlights a willingness to have blood donation as a source of support for efforts against aggression). In particular, 72 (78.3%) cited this reason as one of the reasons they donate blood. The second number one motivation was to help strangers – information gathered through social media and university announcements – reported from 63 (68.5%) respondents. Also, 22 (23.9%) of respondents said they had donated to save the lives of relatives or acquaintances, 21 (22.8%) participated on June 14 for International Blood Donor Day and 10 (10.9%) for the financial incentive and 16 (17.4%) had more personal reasons such as having a rare

blood type, thus donating more often. The majority of student donors plan to donate blood and/or blood components in subsequent endeavors.

As a whole, students who specialize in medicine demonstrate a larger level of activity of donation in the society, probably the resulting awareness of societal requirements of humanitarian demand of donations during war and security guarantees attached to it. Only the medical students aged 20 and older were among the most donors of blood and their ingredients in the sample of our research population; clearly, it was these individuals who reported deciding whether or not to donate according to their compelling altruistic motivation, which was towards helping those injured in the wake of Russia's military aggression in Ukraine and military personnel as well as civilians.

Characteristics of the subgroups of non-donors (IB and IIB):

When evaluating the subgroups of individuals who have not donated, several socio-demographic characteristics were observed. A statistically significant age difference was noted among universities based on their educational focus (medical versus non-medical). Specifically, younger students were more prevalent in the non-medical category, Xi2(1, N = 345) = 20.8, p□0.00001 (see Table 4). Among the gender distribution for non-donors from both medical and non-medical educational backgrounds, found no significant difference (p□0.05), among which there were 103 males (29.9%), of whom 38 were studying at medical university and 65 were enrolled at other institutions (refer to Table 4).

Among the surveyed population of students who had never donated blood or its components, comprising 345 (79%) individuals, 118 (61.5%) pursued a medical education while 227 (92.7%) followed a non-medical path (see Table 2). We explored their reasoning for not donating blood. A marked difference was obtained between responses of students in medicine and non-medics, Xi^2(3, N = 345) = 40.73, p□0.00001 (Table 4). Health contraindications were the most identified reason among the medical students for not doing donations, cited by 50 participants (42.4%). This implies future physicians have more of an awareness of their health status and when to donate. In response, one-third of respondents 36 (30.5%) reported insufficient information as a barrier, and others 19 (16.1%) stated perceived lack of need or fear associated with pain/needles – 13 (11%). Conversely, the majority of those surveyed – 118 (52%) non-medical students – indicated the inability to make donors due to lack of information as the biggest obstacle; also 29 respondents (12.8%) did not consider need to be donors. A fifth of them 49 (21.5%) reported fear of pain or needles, and another group reported health-related contraindications – 31 (13.7%). The same was true for the perceived future donor desire in all the health research sub-research based on studies with their medical specialty or non-medical specialty: Xi^2(2, N = 345) = 11.8, p□0.05 (Table 4). Medical degree students were more likely than non-medical students to participate in donation programs. Comprehensive details regarding the motivations for declining to donate and future intentions can be found in Table 4.

Table 4
Characteristics of subgroups of non-donors among students of Poltava depending on medical or non-medical areas of education.

Non-donors	IB (n = 118) medical	IIB (n = 227) non-medical	Total (n = 345)	p-value
Age				
18–20 years	50 (42.4%)	154 (67.8%)	204 (59.1%)	0.00001*
20 years	68 (57.6%)	73 (32.2%)	141 (40.9%)	
Gender				
Male	38 (32.2%)	65 (28.6%)	103 (29.9%)	0.472
Female	80 (67.8%)	162 (71.4%)	242 (70.1%)	
The main reasons, prevented donation				
Fear of pain or needles	13 (11%)	49 (21.5%)	62 (18%)	0.00001*
Contraindications due to health condition	50 (42.4%)	31 (13.7%)	81 (23.5%)	
Insufficient information	36 (30.5%)	118 (52%)	154 (44.6%)	
Do not see the need	19 (16.1%)	29 (12.8%)	48 (13.9%)	
Desire to become a donor in the future				
Definitely	47 (39.8%)	51 (22.5%)	98 (28.4%)	0.05*
Maybe	61 (51.7%)	146 (64.3%)	207 (60%)	
No	10 (8.5%)	30 (13.2%)	40 (11.6%)	
**Significant p-value (0.05).*				

Conclusions

Summing up, it can be noted that in general, the student youth of Poltava city have a positive attitude towards the idea of donation and, given the right motivation, most students would not mind joining the

donor movement.

To raise awareness about blood donation, dispel prevalent myths and stereotypes, and emphasize the importance of regular blood donation, we propose the implementation of several strategies:

1. Curriculum integration: accurate information about blood donation and its components should be seamlessly integrated into the university curricula for junior students across all fields of study. This integration should be part of their educational framework related to national defense, acknowledging the strategic importance of blood donation during times of war conflict. The curriculum must clearly outline the donation process, highlight its safety for donors, emphasize its critical significance for recipients, and include inspiring experience about notable individuals who have donated blood or its components.
2. Information dissemination: it is crucial to inform students about the locations of blood collection points, their operating hours, and contact information. This can be achieved through the distribution of flyers containing this information on university campuses and in public spaces. Engaging medical students in this initiative is vital, as our research suggests they have a deeper understanding of donation-related issues.

It should be remembered that students are the most active and motivated segment of our society, and young people are mostly in excellent health, which allows them to be excellent donors [3, 4, 6, 7, 10–12]. A sufficient supply of blood and its components in blood banks is a guarantee for effectively supporting those injured during wartime conditions.

Declarations

Information disclosure:

Conflict of interest

The authors declare no conflict of interest.

Human Ethics and Consent to Participate declarations:

The approval for the study was obtained from the Commission on Ethical Issues and Bioethics of Poltava State Medical University at meeting No. 241 dated September 18, 2025. It was affirmed that the study's design, methods for data collection, and informed consent documentation adhere to the ethical standards outlined in the Declaration of Helsinki and uphold principles of academic integrity. The research has been designated as “Exempt from Continuous Ethical Oversight” due to the complete anonymity maintained throughout the survey process.

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Author Contribution

T.L. wrote the main manuscript text and formulated conclusions.H.L. conducted the survey, did statistical calculations, and prepared tables 1-4 and figures 1-4.T.R. conducted a literature review and developed the survey.

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Figures

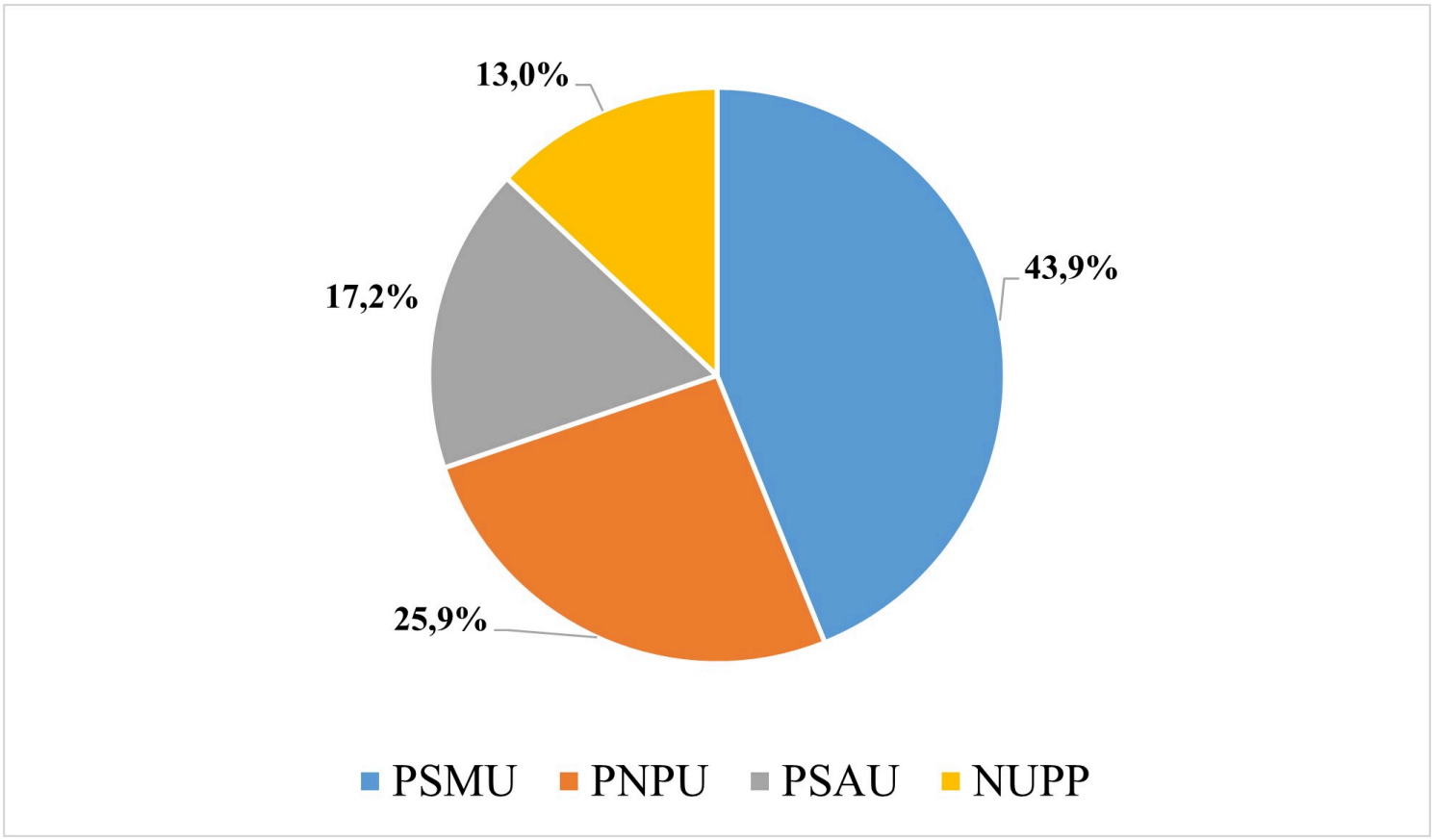


Figure 1

Responders' distribution by the University.

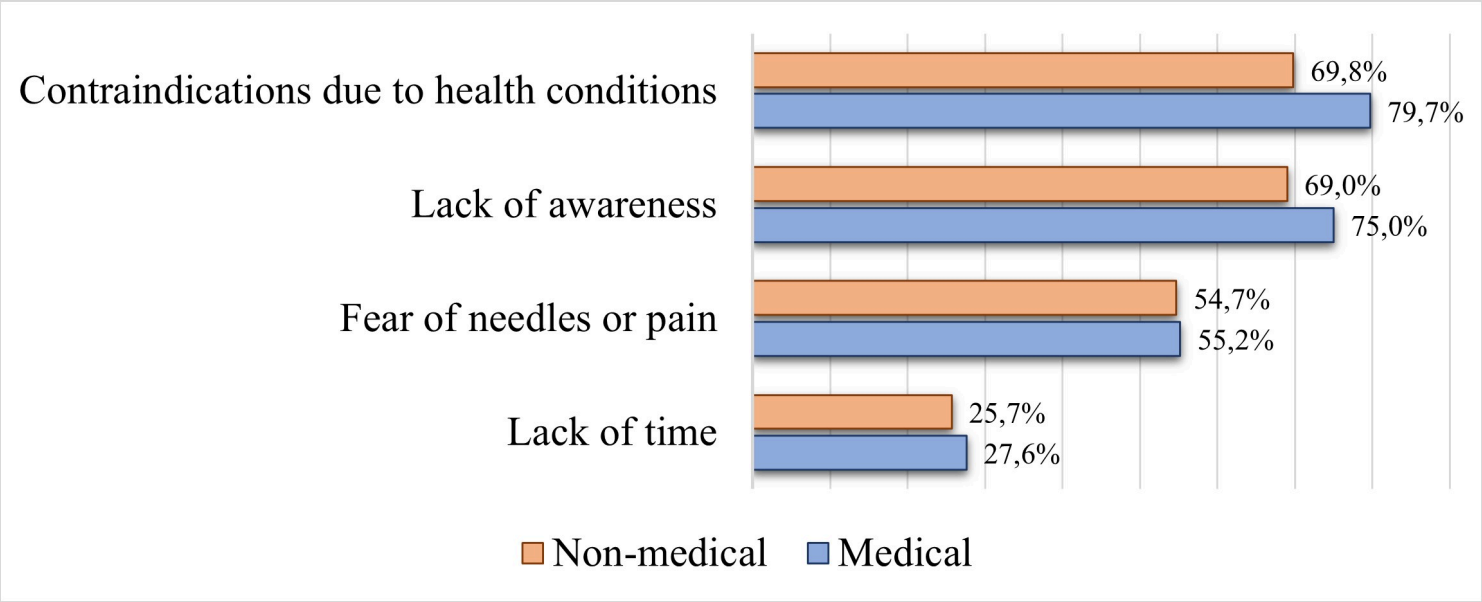


Figure 2

The main obstacles preventing youth participation in the donor movement, as identified by the surveyed students.

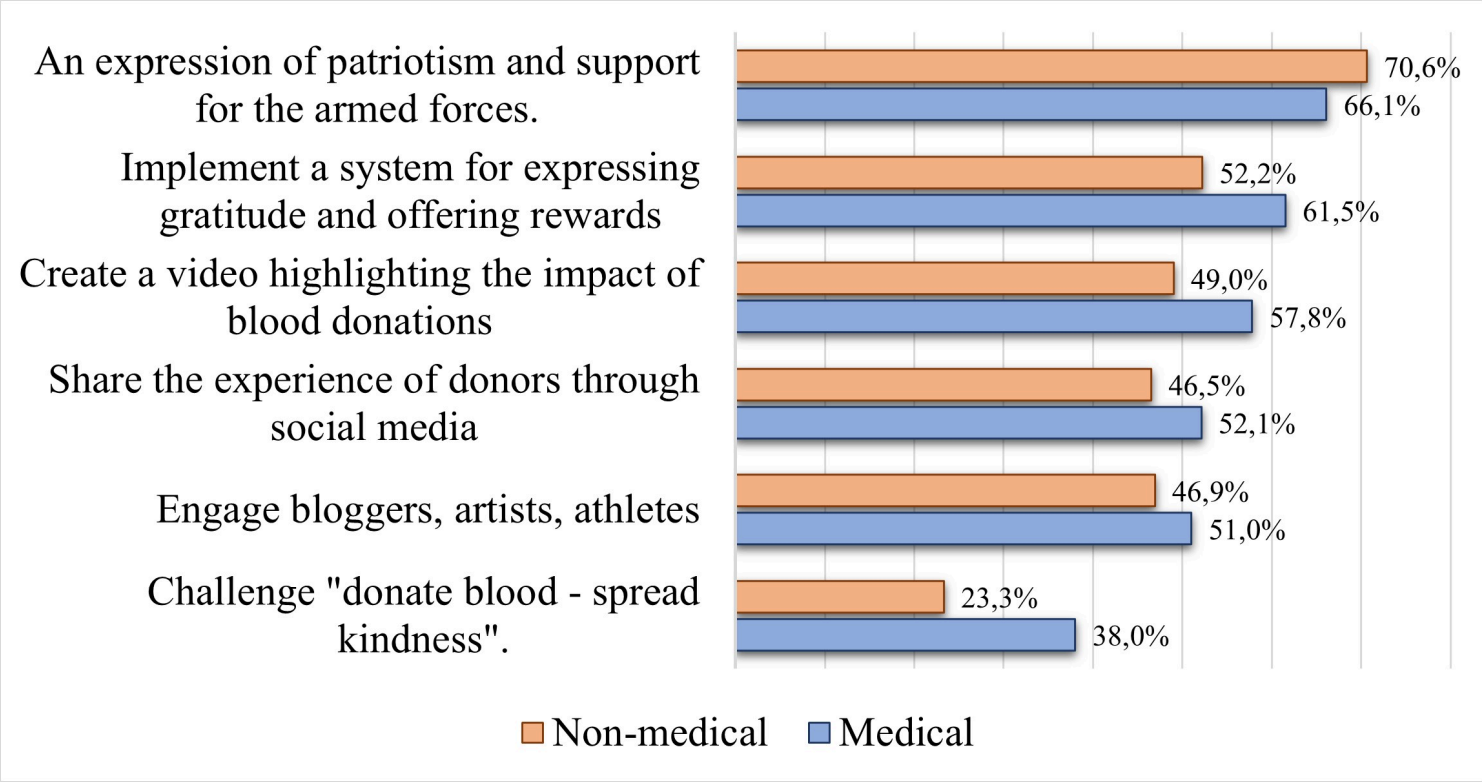


Figure 3

The main motivational factors, according to the surveyed students, that would encourage young students to join the donor movement.

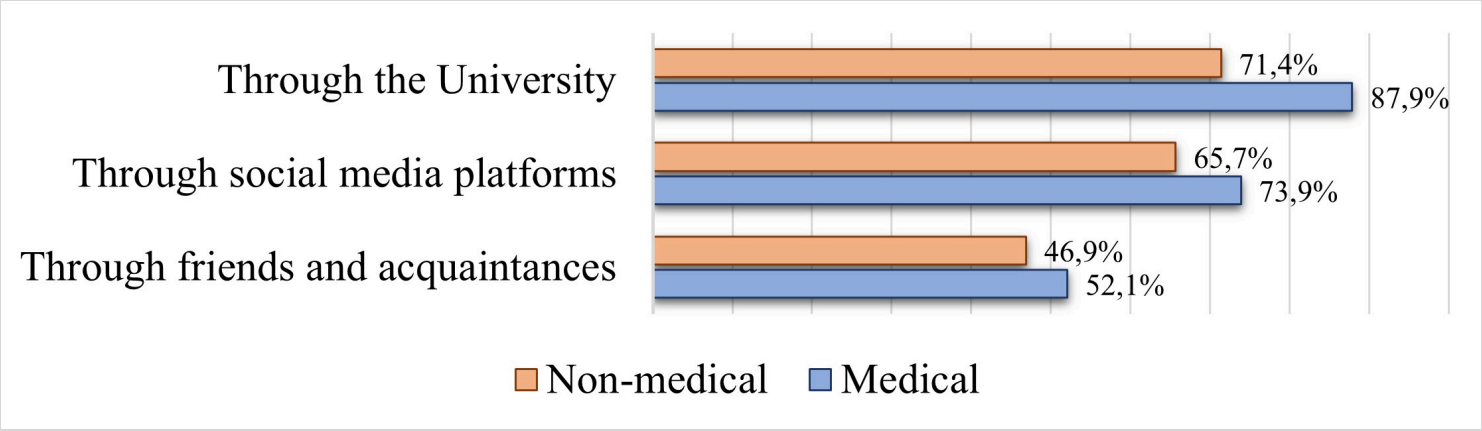


Figure 4

The primary favored approaches for sharing information regarding donations among the student population in Poltava.

Supplementary Files

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- SURVEY.pdf