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## FORMATION OF PUBLIC OPINION ON ORGAN DONATION IN UKRAINE

**Abstract.** The main purpose of the research is to analyze public opinion on organ donation in Ukraine among the population aged 18-44. Systematization of literary sources and approaches to the issue of organ donation indicates that there is a shortage of organ donors in Ukraine. The relevance of the decision on this scientific problem is that public awareness campaigns need to develop the transplant system in Ukraine. The research methods are used: questionnaire, statistical analysis, analysis of the legal framework, and comparison. The research object is the population aged 18-44 living in the Sumy region. The paper presents the results of a study on respondents' level of awareness and attitude toward organ donation. An online survey of young people aged 18-44 living in the Sumy region was conducted on 4-11 February 2021 to obtain opinions on organ donation. A sample is 196 people. The idea of developing organ donation in Ukraine was supported by 79.1% of respondents. Moreover, 19% of respondents have not yet decided on their attitude. Only 20.9% of respondents believe that Ukraine has highly qualified doctors and appropriate equipment, and other answers indicate a low level of trust in medicine. Most of the negative information about donations comes from television and social networks. 44.2% of respondents are not yet ready to fill in the consent for the donation of certain bodies, 48.8% - gave a positive answer, and 7% will not fill in the consent at all. In general, young people living in Sumy believe that the transplant system should be implemented in Ukraine because it is an important component of saving people, and they want to save other people's lives. However, distrust in doctors' qualifications and the impact of negative information on television and social networks are not yet ready to complete a donation agreement. The research empirically confirms and theoretically proves that a group of people has not defined their attitude to organ donation. It is expedient to direct awareness campaigns to them to promote organ donation in Ukraine. The research results can be helpful for organizations that promote organ donation in Ukraine.

**Keywords:** organ donation, promotion, questionnaire, transplantation, social marketing, propaganda, public opinion.

**Introduction.** In 2019 the need for vital signs in donor organs in Ukraine was up to 5,000 people, and only 130 operations were performed per year. At that time, Ukraine ranked last among European countries in terms of posthumous donations. It was up to 0.1 cases per 1 million population, which is 250 times less than in Spain, the world leader (Horban, 2021).

The problem of donation and transplantation is one of the most difficult to discuss in society among other problems. Solving these problems through government programs and social advertising will increase the promotion of organ donation among young people. Successful organ transplants from a corpse donor will increase the number of lives saved (Letunovska et al., 2021a).

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According to the International Registry in Organ Donation and Transplantation in 2018, the leaders in the number of donors per million population are Spain - 46.9, Portugal - 34.0, Belgium - 33.6, Croatia - 33.0, and the United States - 32.0 (Govinfo.gov, 2015).

Germany is one of the last in Europe in the number of posthumous donors. There are only 11 people per million inhabitants whose internal organs were removed after death in 2019 for transplantation to hopelessly ill patients: 15 in Poland, 33 in Belgium, 34 in Portugal, and even 47 in Spain.

In 2019, only 932 patients who died in German hospitals became posthumous donors. Deutsche Stiftung Organ transplantation removed 2,995 internal organs, including 1,524 kidneys, 726 livers, 329 lungs, 324 hearts, 87 pancreas, and five small intestines (Zholkver, 2020).

However, donation promotion programs have been criticized, firstly, as favorites and often as having no scientifically proven basis; secondly, as providing inaccurate or incomplete information on risks to potential donors; and thirdly, have a clear propaganda connotation.

In 2014, the number of organ transplants in the United States was about 30 thousand; in 2019 - it reached 39,717. Only a kidney transplant in 263 transplant centers. Dozens of clinics have long mastered transplanting several internal organs simultaneously (Letunovska et al., 2021b).

Every year in our country, about 5,000 people need organ transplants, but about 3,400 die, unfortunately, without waiting for the operation. Those who need vital signs - go abroad for transplantation to countries that have never been «medical leaders» - India, Turkey, Belarus, and others (Horban, 2021).

Unfortunately, Ukraine does not have a functioning transplant system. All operations are now performed manually and depend solely on the desire of doctors to operate. If there is no such desire tomorrow, then those single operations will cease to be carried out (Saher et al., 2021).

The first steps towards the full launch of the transplant system in Ukraine have already begun. Also, it should be understood that in addition to the material, technical and professional base, in order for such operations to be possible, they also need understanding from the people. Furthermore, we need to start an awareness campaign now because writing such a donation agreement in case of premature death is a grave step that only a few will dare to take.

The work aims to analyze public opinion on organ donation in Ukraine among the population aged 18-44.

**Literature Review.** According to the Web of Science database, more than 2,600 articles are devoted to organ donation. At the same time, only 750 articles are publicly available. Most research is conducted in the fields of Transplantation, Surgery, Immunology, General Internal Medicine, Social Sciences, Biomedical Social Sciences, Public Environmental, Occupational Health, and others. Researchers from around the world studied these questions, but most from the United States (788 articles), Spain (219 articles), England (219 articles), Germany (147 articles), Canada (129 articles), and Australia (124 articles). Ramirez P., Rios A., Parrilla P., Lopez-Navas Al., Martinez-Alarcon L., Matesanz R, Ramis G. have the most works on this topic. Each of them has more than 25 works.

Most of them have been published in «Transplantation Proceedings», «American Journal of Transplantation», «Transplantation», «Clinical Transplant», «Progress in Transplantation», «Journal of Medical Ethics» and others.

The most cited article (458 citations) is «Factors influencing families' consent for the donation of solid organs for transplantation» (Siminoff et al., 2001), published in the «Jama-Journal of the American Medical Association». It explored factors associated with the decision to donate among families of potential solid organ donors. The second most cited article identified the potential impact of improved matching schemes on the number and quality of transplants achievable with KPD (Segev et al., 2005).

In recent years, more articles have emerged to promote the idea of donation, particularly organ donation among the population (Khomenko et al., 2020; Khomenko et al., 2021; Liubchak et al., 2021).

Thus, the work of Hansen S. L. is devoted to social marketing strategies to increase the number of donors (Hansen et al., 2021).

A study is devoted to analyzing the attitude towards the donation of one's organs for transplantation among the Gypsy population under 45 years and with secondary or university studies (Rios et al., 2019).

Reznik O. N. describes existing strategies for popularization and promotion of ideas of deceased organ donation (Reznik et al., 2018).

**Methodology and research methods.** An online survey of young people aged 19-44 living in Sumy Oblast was conducted on 4-11 February 2021 to obtain opinions on organ donation. The questionnaire was developed using Google Forms and distributed via Facebook.

The total population is 386,253 people. This number of people aged 18 to 44 lived in the Sumy region on January 1, 2021. Probability 95%, error 7%. The sample is 196 people.

A questionnaire was developed for the study, which contained the following questions.

Do you think it is necessary to introduce organ donation in Ukraine (yes; no; I do not know)?

In your opinion, organ donation is (an important component of saving people's lives; alternative earnings; crime; others).

How do you feel about organ donation (for; against; categorically against; did not think)?

What influences your attitude towards organ donation (religion; the desire to save someone else's life; negative attitude towards the medical system; stories of people who have had a transplant; other's opinion; others)?

Define your attitude toward the qualifications of doctors who perform transplants in Ukraine:

- available highly qualified doctors and necessary equipment;
- there are highly qualified doctors but no necessary equipment;
- low level of qualification of doctors;
- I do not trust domestic doctors;
- I did not think.

Which statements do you agree with, and which do you disagree with:

- Doctors will not save a potential donor if he is threatened with death.
- When the transplant system works, people will be abducted for the sake of organs.
- People who have had a transplant live less than other healthy people.
- If a person is diagnosed with brain death and his relatives agree to donate, will it be considered

that they sold the person for organs?

If you transplant a person's heart from a thief's donor, he will later become a thief.

- A person has the right to sell his kidney to repay the loan or for other financial gains.

Where do you most often receive negative information about organ donation in Ukraine (from friends and relatives; from the elderly; television; social networks; never heard of)?

Are you ready to consent to the donation of certain organs after your death (yes; no; not ready to answer)?

Your gender is (female; male).

The following methods were also used: statistical - collection and analysis of statistical data on transplantation to assess the need for organ donors; analysis of the legal framework for organ donation; comparison of the prevalence of organ donation in different countries.

**Results.** During November 4-11, 2021, an online survey was conducted on organ donation among young people aged 18-44 in Sumy. This study found that the topic of organ donation is too specific for most people. In total, 200 respondents were interviewed, of which 47% were men and 53% were women (Fig. 1). The answers did not differ significantly between the sexes.

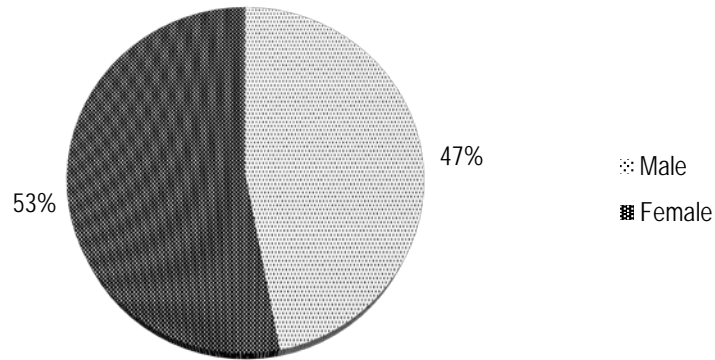


Figure 1. Distribution of respondents by gender

Sources: developed by the authors.

85% said that Ukraine needs to implement an organ donation system, 14% were undecided and 1% gave a negative answer (Fig. 2).

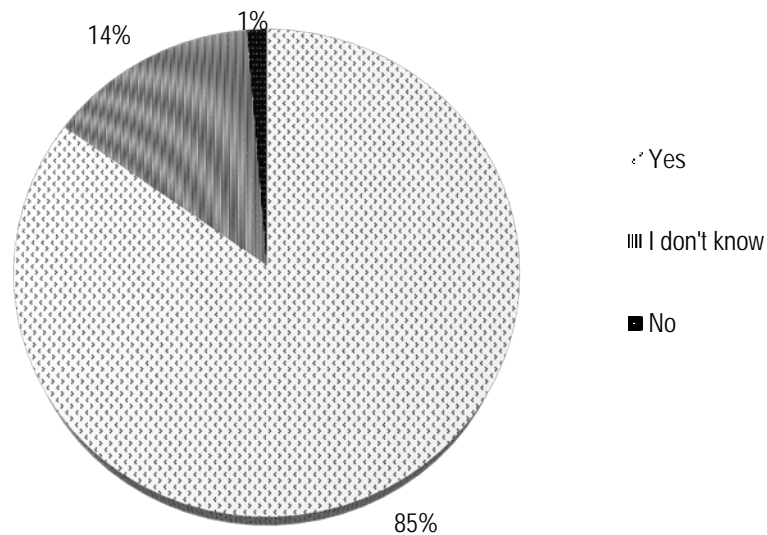
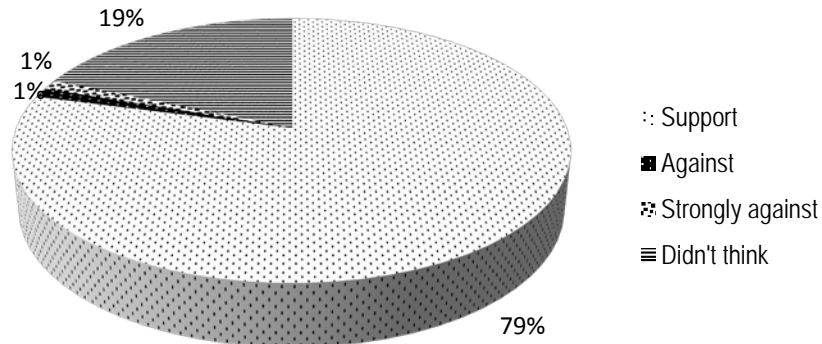


Figure 2. The attitude of young people to the implementation of organ donation in Ukraine

Sources: developed by the authors.

90.7% believe that organ donation is an important component of saving people.

79.1% of respondents supported organ donation, and 18.6% did not think about their attitude. The answers "against" and "categorically against" were distributed by 1.2% (Fig. 3).

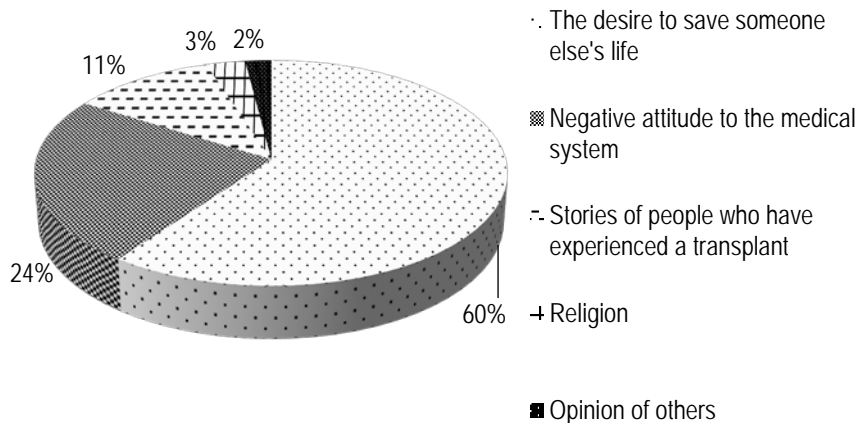


**Figure 3. Attitudes of respondents to organ donation**

Sources: developed by the authors.

Thus, a positive attitude towards donation still prevails among the respondents. It is important that almost 19% of respondents have not yet decided on their attitude. That is why it is important to promote donation in Ukraine to attract new donors.

The most significant influence is social factors - the desire to help other people - 60% and transplantation experience (personal or someone from acquaintances, relatives) - 11%. The most important factor in the negative attitude towards transplantation is the negative attitude towards the medical system - 24% (Fig. 4).



**Figure 4. The influence of factors on the attitude of respondents to organ donation**

Sources: developed by the authors.

Only 20.9% of respondents believe that Ukraine has highly qualified doctors and relevant equipment; other answers indicate a low level of trust in medicine (Fig. 5).

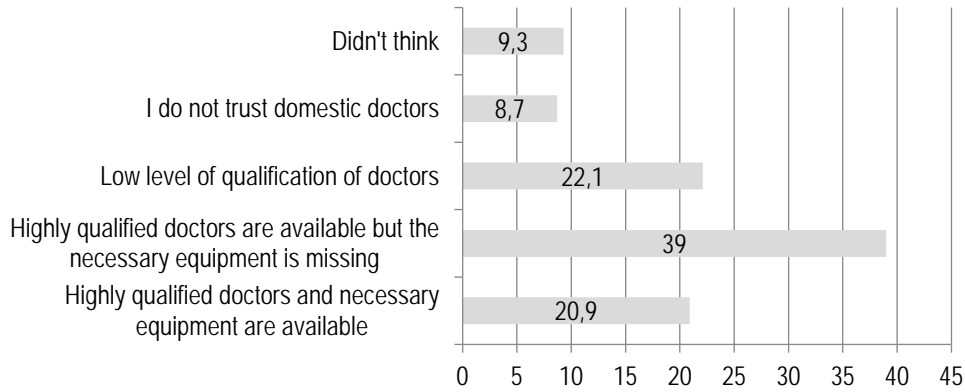


Figure 5. Attitudes of respondents to the qualifications of doctors who perform transplants in Ukraine

Sources: developed by the authors.

Among the common stereotypes, 57% of respondents agree that a person has the right to sell his kidney for financial gain, and 45% agree that when the transplant system works, people will be kidnapped for organs. In other cases, we can see that the attitude of young people to donate is mostly positive (Fig. 6).

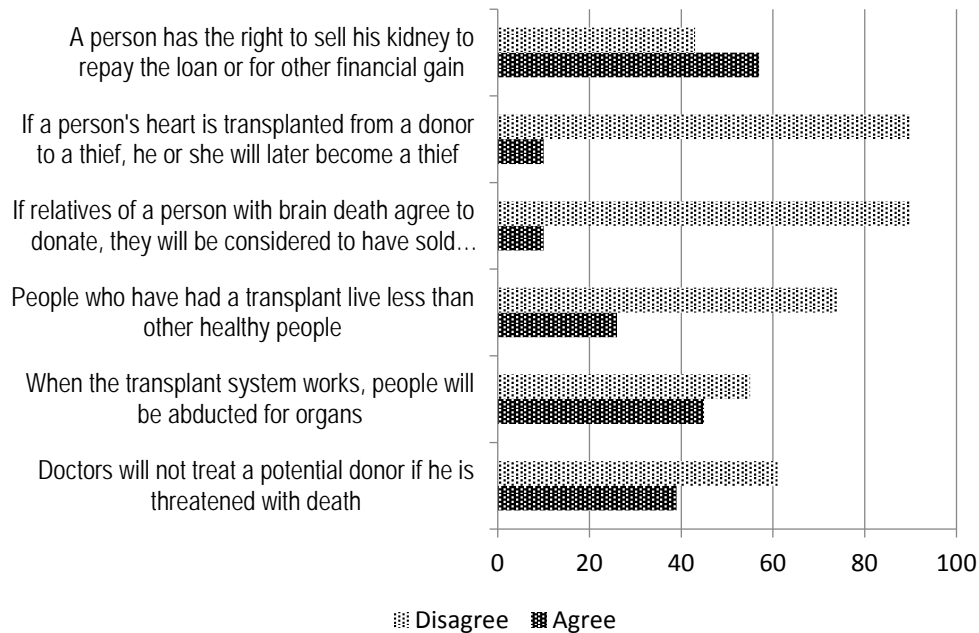
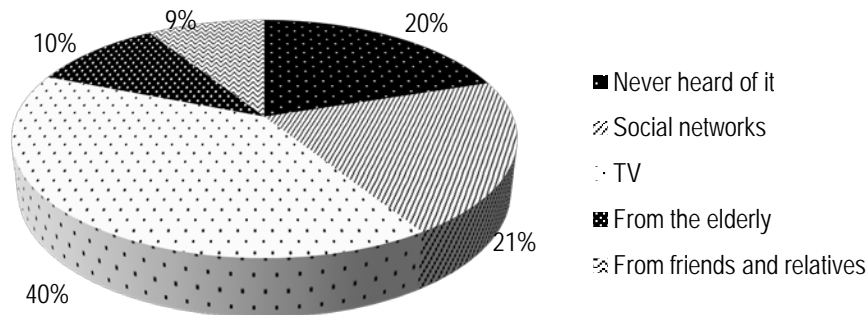


Figure 6. Attitudes of young people to allegations of organ transplantation

Sources: developed by the authors.

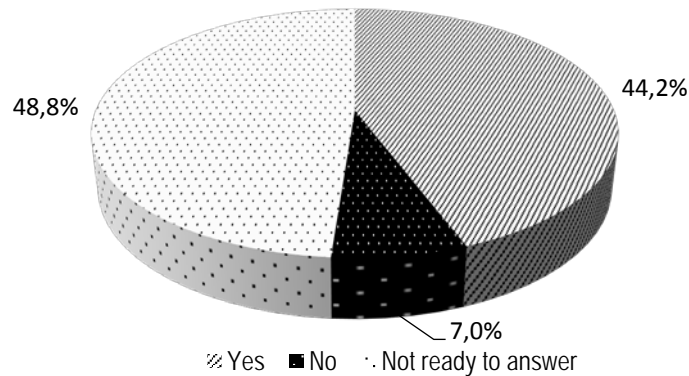
Most of the negative information about donations comes from television - 40%, 21% - from social networks, 10% - from the elderly, and 9% - from friends and relatives. 20% have never heard negative information about this (Fig. 7).



**Figure 7. The source from which the respondents received negative information about organ donation in Ukraine**

Sources: developed by the authors.

44.2% of respondents are not yet ready to answer questions about the readiness to consent to donate to certain bodies, 48.8% - gave a positive answer, and 7% will not fill in the consent at all (Fig. 8). This result confirms no donor support in our country, and the transplant system is just beginning to develop.



**Figure 8. The level of readiness of respondents in life to complete consent to donate certain organs after death**

Sources: developed by the authors.

Thus, young people living in Sumy believe that a transplant system should be implemented in Ukraine, as it is an important component of saving people. They want to save other people's lives but distrust doctors' qualifications and the impact of negative information on television and social networks who are not ready to fill in the donation agreement.

**Conclusions.** The transplant community is interested in promoting donation, as its promotion is an effective tool to increase the number of organs available for transplantation.

State measures to promote posthumous organ donation in Ukraine should increase the number of people wishing to become organ donors. They should address the root causes of ordinary people's reluctance to become organ donors.

Given the survey results, the most appropriate measure on the part of the state is to control the information on television and social networks about transplantation. The media in the modern world have a significant influence on public opinion, so the distribution of social videos about the need for donor organs should encourage people to think about this problem.

It is advisable to create a Transplant Center in each region, which will be endowed with management functions for the selection of potential donors; will monitor and register patients who die in the hospital.

Employees of the center, namely transplant coordinators, will conduct interviews with relatives of the potential donor, will provide advisory and legal assistance to future donors through 24-hour hotlines, and cooperate with NGOs. With the help of such services, a person will find out which medical institutions can fill in the consent or disagreement with organ donation and get all the necessary information about the transplant system in Ukraine.

The center's main goal will be to promote organ donation through social projects and hold educational events in educational institutions. People need to know that organ donation is transparent and legal and that their organs or the organs of loved ones will live in other people.

Mass social actions, the introduction of organ donor day in every corner of our country, will help draw attention to a problem that most have not thought about.

Given that commercialization in the transplant system is prohibited in our country, the survey showed that young people believe that everyone still has the right to sell their organs for financial gain. The only solution without violating the law is to supplement the package of social services with material assistance for burials for persons who, during their lifetime, filled in the consent to posthumous donation and, under appropriate conditions, became them.

An important step is to include filling in the consent/disagreement for organ donation when obtaining a driver's license because drivers are at risk and when obtaining a passport of a citizen of Ukraine. This will help reach many people, and accordingly, the documents will immediately mark the completed application.

More precisely, the subjective interpretation of the position of church ministers on this issue, religious views play an important role in deciding on donation. Often people believe that they should keep their body «intact» after death without violating its original appearance. A similar attitude is associated with the belief that a person does not own his body, so he has no right to dispose of them.

Thus, today it is important to develop and implement state measures to form a positive attitude toward organ donation in society to increase the number of posthumous donors and thus save the lives of many people.

Studying and applying global models to promote organ donation among the population can be helpful for our country. However, despite the obvious effectiveness of some methods, it may be too aggressive to broadcast live in societies with traditional views, including the population of Ukraine.

The study showed that the attitude of young people to donation is mostly positive, but there are still some stereotypes in society about organ transplantation.

It is important to develop and implement state measures to form a positive attitude towards organ donation in society to increase the number of posthumous donors and thus save the lives of many Ukrainians.

1. Establish a Transplant Center in each region, which will be endowed with management functions for selecting potential donors; will monitor and register patients who die in the hospital. The center's staff, namely the transplant coordinators, will see conversations with relatives of the potential donor; will provide advisory and legal assistance to prospective donors through 24-hour hotlines. The center's main goal will



be to promote organ donation through social events and educational activities in educational institutions so that people know that it is transparent and legal that their organs or loved ones will live in other people.

2. To supplement the package of social services with material assistance for burial for persons who, during their lifetime, filled in the consent for post-mortem donation and, under appropriate conditions, Stalin.

3. Inclusion of filling in consent/disagreement for organ donation upon receipt of identity documents (driver's license, passport of a citizen of Ukraine, passport when traveling abroad).

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**Формування громадської думки щодо донорства органів в Україні**

Основною метою дослідження є аналіз громадської думки щодо донорства органів в Україні серед молоді. Систематизація літературних джерел та підходів щодо питання донорства органів свідчить про те, що в Україні

спостерігається нехватка донорів органів. Актуальність вирішення цієї наукової проблеми полягає в тому, що є потреба в проведенні роз'яснювальних кампаній серед населення для розвитку системи трансплантації в Україні. У роботі використані методи дослідження: анкетування, статистичний аналіз, аналіз нормативно-правової бази, порівняння. Об'єктом дослідження є населення віком 18–44 років, що проживає в м. Суми. У статті представлено результати проведеного дослідження щодо рівня інформованості та ставлення респондентів до донорства органів. Для отримання думки про проведення донорства органів в період 4–11.02.2021 року було інтернет-опитування серед молоді 18–44 років, що проживають у м. Суми. Вибірка 196 чоловік. Ідею розвитку донорства органів в Україні підтримали 79,1% респондентів, а 19% респондентів ще не визначилися щодо свого ставлення. Лише 2,9% респондентів підтвердили, що в Україні наявні висококваліфіковані лікарі та відповідне обладнання, інші відповіді свідчать про низький рівень довіри до медицини. Найбільше негативної інформації щодо донорства органів надходить з телебачення та соціальних мереж. 44,2% респондентів поки що не готові підписати згоду на донорство певних органів, 48,8% - дали позитивну відповідь і 7% взагалі не будуть заповнювати згоду. В цілому, молодь, що проживає в м. Суми вважає, що необхідно розширити трансплантацію в Україні, оскільки це важлива складова порятунку і вони мають бажання рятувати людей. Однак через недовіру до кваліфікації лікарів, поширення негативної інформації на телебаченні та в соціальних мережах поки що не готові заповнити згоду на донорство. Дослідження емпірично підтверджує та теоретично доводить, що є значна група людей, які не визначили свого відношення до донорства органів і саме на них, доцільно спрямувати роз'яснювальні кампанії для популяризації донорства органів в Україні. Результати дослідження можуть бути корисними для організацій, які займаються пропагандою донорства органів в Україні.

**Ключові слова:** донорство органів, просування, опитування, трансплантація, соціальний маркетинг, пропаганда, громадська думка.