

Organ donation: nursing undergraduate students' perspective

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Abstract

Organ and tissue donation is generally seen by society as an act of solidarity and love of families. However, it requires crucial decisions in a moment of extreme pain and distress, considering the impact of an unexpected death. This study aimed to identify the organ donation awareness of 57 nursing undergraduate students and their wish to be donors. Students in the fifth, sixth, seventh and eighth semesters of the Catholic University of Brasília, Brazil, participated and answered a questionnaire. The study used a qualitative approach, with the guiding question: "What is the position of nursing students regarding organ donation?" Considering the results, the study concluded that these students are not well informed about the subject, showed solidarity in maintaining life and their religion does not prevent such an act.

Keywords: Tissue and organ procurement-Gift giving. Transplants. Knowledge. Nursing.

Resumo

Doação de órgãos: uma perspectiva de graduandos de enfermagem

A doação de órgãos e tecidos é vista pela sociedade em geral como ato de solidariedade e amor dos familiares. No entanto, exige decisões importantes em momentos de extrema dor e angústia, dado o impacto da notícia de uma morte inesperada. Este estudo teve como objetivo identificar o conhecimento de 57 graduandos de enfermagem sobre doação de órgãos e o desejo de ser ou não doador; participaram graduandos do quinto, sexto, sétimo e oitavo semestres da Universidade Católica de Brasília, que responderam ao questionário. Utilizou-se como método abordagem qualitativa, tendo como pergunta norteadora: "Qual é o posicionamento dos graduandos de enfermagem sobre o tema 'doação de órgãos'?" Levando-se em conta o que foi observado, concluímos que esses estudantes estão pouco esclarecidos quanto ao assunto, manifestam positivamente sua solidariedade na manutenção da vida e que a religião não impede tal ato.

Palavras-chave: Obtenção de tecidos e órgãos-Doações. Transplantes. Conhecimento. Enfermagem.

Resumen

La donación de órganos: una perspectiva de los estudiantes de enfermería

La donación de órganos y tejidos es vista por la sociedad en general como un acto de solidaridad y amor de parte de los familiares. Sin embargo, requiere la toma de decisiones en momentos de extremo dolor y angustia, causados por el impacto de la noticia de una muerte inesperada. Este estudio tuvo como objetivo identificar el conocimiento de 57 estudiantes de enfermería acerca de la donación de órganos y el deseo de ser o no donante; participaron estudiantes de quinto, sexto, séptimo y octavo semestres de la Universidad Católica de Brasília, respondiendo a un cuestionario. Se utilizó un enfoque cualitativo, con la pregunta guía: "¿Cuál es la posición de los estudiantes de enfermería sobre el tema de la donación de órganos?". Teniendo en cuenta lo que se ha observado, concluimos que estos estudiantes no están bien informados sobre la temática, manifestando positivamente su solidaridad en el mantenimiento de la vida y que la religión no impide tal acto.

Palabras clave: Obtención de tejidos y órganos-Donaciones. Trasplantes. Conocimiento. Enfermería.

Aprovação CEP/Universidade Católica de Brasília CAAE 34365814.9.0000.0029

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Declararam não haver conflito de interesse.

Organ and tissues donation is considered by society in general as an act of solidarity and love from family members. However, it requires important decisions in times of extreme suffering and anguish, due to the impact of the announcement of death, loss feelings, and sudden interruption of life path. The donation process is defined as a set of actions and procedures that may change a potential donor in an effective one¹. Considered as a solidarity, valor and renunciation act, it is worth admiring that at the same time that they are experiencing the pain of losing a family member, although the suffering, these people are able to part from the body (matter) of the loved ones and choose to donate².

There are two kinds of donors: after death (*post mortem*) and live donors (*intervivos*). Donation *inter vivos* is allowed only to duplicate organs – such as kidneys – or organs and tissues that regenerate – as the liver, the skin and the bone marrow –, and it can only be donated to the spouse or blood-related family members until fourth degree kinship. If it is not a family member, the donation may be done by legal authorization – a procedure to avoid organs commercialization³. On the other hand, the donation *post mortem* needs the effectiveness of a set of actions and procedures changing the potential donor (PD) into an effective one. PD is the patient that has a diagnosis of brain death (BD), but besides that, the operation is only possible when all clinical counter indications that might pose a risk to the receptors of organs/tissues have been discarded⁴.

Presently, transplants are recognized as therapeutic curative option for many diseases that had a previous gloomy prognostic⁵. If, on one side, transplant techniques allow significant improvements in life quality of the patient, on the other hand, they can lead to several medical, legal, and ethical issues, thus becoming obstacles both to transplants *inter vivos* as to *post mortem ones*⁶.

In 1997, the National Congress passed Act 9,434⁷, regulated by Decree 2,268⁸, establishing legal conditions for the removal of organs, tissues, and parts of the body destined to transplants and treatment, taking into account economic differences in order to minimize rights differences. The law disposed on the assumed donation in absence of expression of will, that is, all individuals were considered as donors, except those that declared themselves as non-donors of organs and tissues, recorded in their identity card or in their driver's license.

On March 23, 2001, Act 10,211 became in force⁹, amending the provisions of the previous law, and establishing that the manifestation regarding donation

of organs, recorded in the identity card and in the driver's license was not valid as of that date. Since then, according to its art. 4th, the removal of tissues, organs and parts of the body of deceased people for transplant or another therapeutic aim became allowed or to depend on the authorization from the spouse or from a familiar member of age, following the successional, direct or collateral line, until the second degree including, signed on a document subscribed by two witnesses present on the verification of death⁹.

According to data from the Associação Brasileira de Transplante de Órgãos (ABTO) – (Brazilian Association of Organ Transplants), the Registro Brasileiro de Transplantes (RBT) – (Brazilian Transplants Record) submitted, during the first semester of 2016, an alarming decrease in growth, and in relation to the same period observed during the previous year. The estimate for effective donors index shows a decrease of 7.1% compared to 2015 and of 18.1% below the expected for 2016¹⁰.

In 2015, there was a stagnation in organs transplants, except for heart transplants. However, during the first semester of 2016, there was a decrease in the number of all transplants, except for lung transplant. Kidney transplant decreased 7.6% (25.2 per million of persons - pmp), with a decrease of 8.9% of deceased donors, and of 2.8% of living donors; the liver transplant decreased 7.5%. Heart transplants grew significantly between 2011 and 2015 - from 160 (0.8 pmp) to 353 (1.7 pmp). However, with estimate to reach 400 transplants (2 pmp) during the year, it dropped 15.1% during the quarter (1.5 pmp). The rate of lung transplant, which was stable until then, reached an increase of 40.5% during the first quarter of 2016. The pancreas transplant continues decreasing since 2011, with one peculiarity: only four states perform this kind of transplant in 2016 (SP, PR, RS and PE)¹⁰.

The news was that in 2016, eligible donors were included (an individual with brain death already diagnosed and without known contraindications). It was also observed that – with exception of the state of São Paulo (data not submitted) – 72% of potential donors notified had confirmed brain death¹⁰.

Thus, efforts from all involved - ABTO, Sistema Nacional de Transplantes (*National Transplants System*) (SNT), the Central de Notificação, Captação e Distribuição de Órgãos (Notification, Captation and Distribution of Organs Center) (CNEDO) -, Organização de Procura de Órgãos (Organization to Organs Seek) (OPO) -, Comissão Intra-Hospitalar de Doação de Órgãos, Tecidos para Transplante (Inter Hospital Commission of Organs and Tissues for Transplant),

(CIHDOTT) - and transplant teams should be doubled in unusual years such as 2016 (when there will be held the Olympics and municipal elections), since there is an increase in the flow of persons to these events allied to sensitization campaigns they might be able to make the population aware of the significance of this act. Thus, the theme can be discussed among families and increase the number of donors, in order to reverse these data and, therefore, save the life of persons that need transplants.

It is undeniable the contribution of the nurse to the success of the transplant: they render skilled in the protection, promotion and health rehabilitation of the candidates, receptors, and their family members, as well as of living donors and family members, throughout their life cycle¹¹. Thus, it is justified to choose the theme for its social relevance, the magnitude the act represents, and because the nurses are involved in the whole process, since the follow-up of the brain death diagnoses stages, to the maintenance of the possible donor, the family interview, as of the confirmation of the BD, until the transplant itself. Therefore, it is important to know the positioning, the knowledge, and the opinion of these professionals on the theme.

In this study, we sought identifying the knowledge of nursing students on organs donations; verify their understanding on the laws in force in Brazil, regarding the matter; verify the religiosity, and its influence on donation of organs; and evaluate as well if, at any time, they have written some document or if they have informed their families on their wish to be or not to be a donor.

Method

We have decided on a mixed research, mainly qualitative. The conjugation of quality and quantity is justified by the advantages of qualitative articulation of descriptive data, regarding the issue investigates, with quantitative support by numerical data, using statistical treatment¹². The study was developed in the undergratuation nursing course at Universidade Católica de Brasília (UCB) Catholic University of Brasilia, bearing, at the time of the research, 277 effective students. The sample was calculated according to the following formula:

$$n = \frac{N Z^2 p (1-p)}{(N-1) e^2 + Z^2 p (1-p)}$$

In this equation "n" is the calculated sample; "N" the population; "Z" the normal standardized

variable associated to the confidence level; "p" a true probability of the event; and "e" the sample error. A sample error of 10% was considered, that is, the difference between the estimate value by the study and the actual value; and 90% of confidence level, which is the probability that the actual sample error shall be less than the sample error admitted by the study, with a total population of 277 students.

The sample was of 57 individuals and the inclusion criterion was being students of the fifth, sixth, seventh, and eighth semesters of the nursing undergraduate course of Universidade Católica de Brasília (UCB) (Catholic University of Brasilia). The criterion was established taking into account that soon they would be health professionals, and probably having enough and autonomous knowledge on organ donation.

The sample was made by inviting one student at random. In the event of a positive response and that the student was attending one of the semesters according to the inclusion criterion, he or she was taken to the previously selected room, where the interviewer informed him or her on the mechanism and aim of the survey, as well as about the free consent term and assurance of confidentiality. Then, the questionnaire should be answered in approximately 20 minutes. After answered and returned, the instruments were codified as follows: A1, A2, and so on.

The data collection was made between October and November 2014, using the questionnaire with sixteen question, open and closed, related to the nursing students' insight on organs donation. Previously, the questionnaire had been submitted to four experts, nursing professors of UCB, masters and doctors, with knowledge on the area of transplants, in order to manifest themselves on the explicitness and possible difficulties on the questions. The final version, after suggestions by the experts and the analysis of explicitness, is presented as an attachment.

The quantitative analysis of data was based on descriptive statistics procedures, and the qualitative analysis was obtained by analysis of the content— understood as a group of techniques of communications analysis aiming at obtaining, through systematic and objective procedures, the description of the content of messages, which are indicators that allow to infer knowledge on the conditions of production/reception of those messages, according to Bardin's proposal¹³.

There was an exhaustive reading of the answers given, in order to systematize the initial ideas. From

this reading came themes of record units, which apparition and frequency of expressions allowed discriminate them, according to their semantics and meaning. Thus, it was possible to categorize, which constituted an operation of classification of elements forming a group by differentiation, and, afterwards, by regrouping, according to previously defined criteria.

The context units extracted from answers were grouped according to common characteristics of their elements, thus originating eight empirical categories:

- The realization of being an organ donor not;
- Inadequacy of information;
- Misinformation;
- Influence of university education in knowledge;
- The role of the State and education in health;
- Religiousness;
- Information to the family;
- Elaboration of informative document.

Results and discussion

In order to characterize the nursing students interviewed, sociodemographic variable were collected. From the 57 subjects participating in the study, 10 were male (18%) and 47 female (82%), aged between 19 and 50 years; 36 were Catholics, 11 Christians, 4 Atheists, 2 Protestants, 3 Spiritualists, and 1 Agnostic. After exhaustive reading of the answers, there was the perception of the presence of frequent elements, which allowed gathering them in categories, with the aim of better understanding/a deeper study on the theme approached.

The realization of being an organ donor or not

When questioned on the authorization to donate organs, 17 interviewed (30%) showed interest in become donors, justifying that they would do it due to their wish to help maintain life, which can be clearly observed in answers such as:

"Yes. Because it is an opportunity to give other people a better life" (A39);

"I have interest. I think it is very cool to help those who need" (A13);

"I am not yet, but I am most interested in becoming a donor or organs to help those people who need it

so much, and that stand so many years waiting for it on a list (A14).

The tenor of speeches is according to the study by Santos¹⁴, who says that the donation attitude and the consent to remove organs and tissues comfort and give hope to people waiting for a transplant. Helping your neighbor is seen as solidarity, indication the willingness of the human being in devoting themselves to others. The participants of the study also understand organ donation as a form to collaborate with your neighbor.

Inadequacy of information

Among interviewed people, 10 would not authorize the donation (22.2%) because they consider it difficult to confirm brain death, or because they do not know how is the process of organ donation, which, for some is obscure: "We donate the organs and we do not even know if they are maintained in the right place, fear of selling them, and who needs them in the waiting list" (A27).

Another study also observe among volunteers of the study a suspicion regarding the way the process of donation of organs for transplants is conducted, raising doubts on the truthfulness and credibility of the transplants system. They feared that the medical interest was shady, not prioritizing the patient's well-being¹⁵.

Misinformation

Those 30 interviewed that declared being non-donors (57%) justified their answers on the lack of knowledge, and on the fear regarding commercialization of organs:

"I do not have interest until now, even been aware of the significance, maybe by the lack of incentive and information" (A38);

"I have interest in donating, but I do not have enough information" (A37).

When questioned the undergraduates on laws on organs donation in Brazil, 45 answered that did not know about then or that they knew them superficially (79%):

Not much. I know it superficially, and for this reason I did not registry myself as willing to donate" (A43);

"No, I have never sought information on legislation, and what I know comes through the media" (A45);

"No. I have never heard about it." (A40);

"No, because is out of the public eye " (A19).

The 12 students that answered affirmatively regarding knowledge of the law (21%) mentioned only some aspects of the legislation, such as:

"Law created in 1997, regarding the gratuitousness of organs donation, which have to be done by health institutions. Organs can only be removed with previous consent by the person or their family members" (A31);

"Disposes on the ethical and legal aspects for organs donations" (A55).

According to Traiber and Lopes¹⁶, many professionals of health area do not have an adequate knowledge on the subject, and consequently, there should be proposals of campaigns and refreshing courses to improve their education. According to these authors, most part of the population receives information on the transplant of organs and donation by mass media communication - television, radio, newspaper and magazines.

A study conducted with adolescents in the city of Recife (PE) on organ donation showed that the interviewed highlighted commercials and television soap operas, and the Internet and the *site* of the Health Department - Ministério da Saúde [Health Ministry] (MS)¹⁷ as source of information. It should be said that many times these themes are seen in television soap operas, and considered strategic to inform the population on health aspects.

The role of means of communication is fundamental in public health, because it bears the power to stimulate attitudes, and thus, change reality. The partnership between the MS and the social networking Facebook, launched in July 30, 2012, made that approximately 80 thousand persons declare themselves as donors of organs and share their decision with friends and relatives. In order to express their wish to be a donor in Facebook, it is sufficient to go to your timeline and click on "daily event". Then, it is necessary to choose the option "Health and Well-being" and click on "Organ donor", selecting the persons that will have access to that information. It is important to emphasize that this does not substitute the legal path that the person has to go through, because it is the family who decides if they authorize or not the donation of organs.

A smaller number of interviewed declared been influenced by family members, friends,

healthcare professionals, and campaigns that talk about organs donation. The quality of information is more important than the vehicle that conveys it. The well-informed citizen is able to discuss with family members and friends something that can become a mechanism to stimulate the donation of organs¹⁶.

Mendes and collaborators¹¹ also emphasize that the actions of nurses in transplants, in all aspects of their practice – based on ethics and on the law – is fundamental to preserve the autonomy, dignity, and rights of all actors involved in the process.

Influence of university education in knowledge

When questioned if the theme was present as an integrant content of some subject of the nursing course, 23 undergraduates answered "yes", in bioethics. From these 23, 7 mentioned that they saw the theme in other subjects: immunology; pathology; ethics; planning and management; ICU; and surgical nursing. In total, from 57 interviewed, 40.3% said that the theme "organs donation" was part of some subject during their graduation.

We can consider this amount as worrisome, since many professionals of the area will act as health educators and agents of awareness on organ donation. A theme with an ethical and social character such as this should be approached in educating these professionals with the frequency and necessary study.

Mendes and collaborators¹¹ think that undergraduate programs on nursing should include subjects related to the process of donation and transplant in their syllabus of subjects related no medical surgical nursing, ethics and bioethics. Other institutions also inform their nursing academicians on the process of donation/transplant through student leagues.

The role of the State and education in health

When questioned on the role of the State on this theme, we had the following answers:

"Give more information to the population, divulge more the subject through the media" (A9);

"Average; ensure the access with safety and quality; care about equity" (A3);

"Inform the whole population on the risks and benefits of the donation of organs " (A19);

"Provide skilled personnel, material, safe and quick means of transportation to improve organs capitacion" (A16);

"Campaigns as a way to inform society, investments in professionals of the area with courses in order to improve techniques" (A46);

"It has the role to divulge and finance, thus providing the necessary resources to perform the transplant" (A33).

These answers are according to the information obtained by the Brazilian Journal of Transplants, which assumes that the State is responsible for promoting the well-being of all citizens. It should be emphasized the role of the government in financing, maintenance, furnishing, control and inspection of activities related to the transplant of organs, tissues and cells of human origin¹⁸.

The decision to increment this policy with clear objectives, thus ensuring the right to a transplant, the increase of the number and the improvement of transplants, and reduction of waiting lists, must be done with the elaboration of programs of donation and transplant, aiming at integrating equity, coverage, and care. It is necessary to evidence that the correct enforcement of these measures requires that the State ensure the universal coverage of healthcare services to all citizens that need a transplant, considering their organizational particularities, and always abiding by ethical guidelines¹⁸.

Religiosity

Most of the participants (75%) – divided among Catholics, Christians, atheists, protestants, spiritualists, and agnostics –, when questioned on the religiosity and if it forbid the donation of organs, said that their religion did not forbid it; 23% said that they did not know, and only 2% answered affirmatively.

The data confirm several studies that showed that few religions forbid the donation of organs, although there are some authors that say that they exist, among some religious leaders, misinformation, and contradictions connected to the subject. Within this approach, there is emphasis to the insufficient knowledge on the concept of brain death. Anyway, there is evidence that most religious leaders understand that the religion should follow the progress of medicine¹⁹.

However, in fact, not all religions accept organs donations. Some Ulema Muslims from Asia and Muslims oppose donation in life or after death because they think that the body is under the "custody of God", and therefore is inviolable. Catholicism defends and stimulates the donation as an altruist act, which

reveals love. However, due to the sacred nature of human life, it is against the donation of organs by anencephalic individuals, or after active euthanasia. According to Islamism, the human being does not own part or the total of their body, and their organs should not be negotiated, but donated²⁰. This scenery indicates the need to be cautious in attempting to increase the forms of divulgation of the policy of organs donations and on how to proceed to document your own wish to donate.

As there is no transplant without the involvement of society, the enlightenment of the public and the incentive to donation of organs are indispensable. Therefore, it is necessary that the measures implemented are fully understood and accepted by the population, to avoid creating unpopular rules that might be rejected in practice. This occurred with the mentioned Act 9,434/97, in which Art. 4th assumed the authorization to *donate tissues, organs or parts of the human body*, except if there was manifestation of an antagonistic desire to do so⁷. It is important also to count on the support of priests, pastors, ministers, officiants, priests of Brazilian religion called *Pais de Santo*, as well as managers and professionals of the healthcare area, informed on the matter.

Information to the family

From the participants of the study. 63% said that they had already communicated to their family on their wish to be or not to be a donor. Among those who declared to be organs donors, 78% already informed their families on their status.

Studies performed with families of donors showed that an important factor for this decision was the previous discussion on donation among the family members. A research made in Pelotas (RS), which evaluated the sample of 3.159 adults through a questionnaire, showed that 80.1% would authorize the donation of organs of a family member, if the latter had previously expressed their wish to be a donor. However, only one third of the interviewed would authorize the donation if there was not a previous discussion with the family¹⁶. We can, therefore, infer that campaigns are essential to stimulate persons to discuss on organ donation and transplants with their family members¹⁹.

Elaboration of informative document

None of the participants said that they had, at any time, written a document to inform on being an organ donor. Act 10,2011/2001 revoking the

assumed donation, established that the donation of organs would depend on the wish of the patient, the authorization of the spouse or of a relative of age, following the collateral line until the second degree including, signed in a document subscribed by two witnesses present to the confirmation of death^{7,21}.

The main step to become a donor is to talk with the family and be clear about your desire. In donation *post mortem*, family members should commit in authorizing the donation in writing. Besides, healthcare professionals should know how to elaborate these affidavits, and which are the procedures that the users should follow to create them.

Final considerations

We should highlight that, as all scientific studies, our research has some limitations that might be minimized in future papers. One of them is the fact that it was performed with nursing undergraduates, from a specific region in Brazil, that is, we cannot generalize results obtained. Other limitation, despite all care taken, regards the possible information biases by the interviewed, as lack of attention or understanding, haste in answering, self-censorship, and fear to be identified through their opinions, considering the fact that are few nurses that act in his scenery in the State.

However, these limitations do not depreciate the results of the study, and the conclusions that we have reached. The study records the opinion and knowledge of students of nursing, and its results might be useful in future comparisons, since this kind of study must try to encompass the higher number of institutions, units of the federation, and nursing students.

From the analysis of the opinions of the 57 undergraduate nursing students, we identified a positive attitude regarding the donation of organs, expressed in solidarity with "maintaining life", and in the percentage of students that declared being organs donors.

However, there is the coexistence of feelings of inadequacy of information provided by the State

on the subject, and insecurity regarding guarantees regarding the destination of organs, and the compliance with laws in force. We understand that the citizen will only be able to decide on questions of life, as of the time when they are completely aware of the subject and receive the necessary information.

The senior year nursing undergraduates expressed "lack of knowledge on the legislation" in force on organs donations. This impeaches them to perform the role of conveyors of information to the population, and, on the other hand, it also alienates then regarding their autonomy to be organ donors. Thus, it is necessary that this situation be reversed as quickly as possible, so that these professionals can take on the role of healthcare educators and convey their knowledge.

Regarding religion, we have seen that it does not forbid or represents a negative influence regarding organs donation.

The study confirms that the education of professionals does not allow a wide view on the theme. Undergraduation in nursing seldom talks about death, and when it does, it concentrates more on the technical care involved. Therefore, it is necessary to implement changes in academy to restructure the approaches on death and the theme of donation of organs and tissues/transplants.

The difficulties to donate organs, its acceptance by society, and the consolidation of public policies on the theme refer, mainly, to lack of knowledge on their criteria and legislation. Taking into account what was observed, we concluded that these students are little informed on the subject, showing their solidarity positively in maintaining life and that religion is not a big hindrance to donation.

Thus, we suggest the adoption of continuous educative measures to nursing undergraduates with an approach more oriented towards the theme, creating an awareness on the significance of the process of donation, so that they can turn their eyes to and contribute to increase the number of donors, both living and non-living ones.

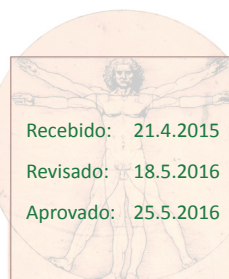
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Participation of the authors

Cliciane Bishop Ramos and Janaísa Carvalho Lima performed the research articles and material for theoretical study, development of the written work, data collection and analysis of results. Maria Liz Cunha de Oliveira guided the work, setting the direction for the development of the study and revised the article.



Attachment

Questionnaire

Organ donation: what do undergraduate students' think.

1. Are you a donor of organs and tissues? Are you interested in becoming one? If not, justify.

Yes

No

2. Which is your profession?

Nursing Undergraduate

3. At UCB you are a...?

Student

4. How old are you? _____

5. Gender?

Female

Male

6. Which is your religion? _____

7. Does your religion forbid donation of organs and tissues?

Yes

No

I do not know

8. Do you know Brazilian Laws on organs donation? Justify.

9. Is the theme donation of organs part of the content of any of subjects that you have studied? Which?

10. You or someone from your family has already donated organs and tissues?

Yes

No

11. Is someone from your family on the line, or has been on the waiting list for organs donation?

12. Whom do you think would be responsible for the information process to health professionals on this matter?

13. In your opinion, what is the role of the State regarding organs donation?

14. Have you informed your family on your wish of being or not being an organs and tissues donor?

Yes

No

15. Do you have it specified in your ID that you are a donor?

Yes

No

16. Have you written a document informing your family that you are a donor?

Yes

No

Thank you for participating!