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RESEARCH

Perceptions of medical students and doctors of the autonomy in organ donation

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Abstract

Brazilian law adopts the family decision as a criterion for organ and tissue donation. The objective of this work was to assess the knowledge and opinion of medical professors, residents, and medical students on the subject. This was a descriptive cross-sectional study using a questionnaire. The survey was answered by 304 scholars split into 3 study cycles, 19 residents, and 30 professors totaling 353 participants. Of all participants, 99,1%% of women and 94,9% of men were in favor of organ and tissue donation. They agreed that the main criterion should be the person's will, 104 (81.2% n=128) students of the basic cycle, 62 (82.7% n=75) of the clinicians, 82 (81.2% n=101) from the internship, 15 (78,9%) of the residents, and 25 (83.3%) of the professors. It was concluded that the person's previous manifestation is a relevant criterion for donating their organs and tissues, which can promote respect for their autonomy, family acceptance, and the increase in the number of donors.
Keywords: Tissue and organ procurement. Legislation as topic. Personal autonomy. Advance directives.

Resumo

Percepção de estudantes e médicos sobre autonomia na doação de órgãos

A legislação brasileira adota a decisão familiar como critério para doação de órgãos e tecidos. O objetivo deste trabalho foi identificar o conhecimento e a opinião de professores médicos, residentes e alunos de medicina sobre o tema. Trata-se de estudo transversal descritivo com aplicação de questionário, respondido por 353 participantes: 304 estudantes, divididos em três ciclos de estudos, 19 residentes e 30 professores. Manifestaram-se favoravelmente à doação de órgãos e tecidos 99,1% das mulheres e 94,9% dos homens. Concordaram que o principal critério deveria ser a vontade da pessoa 104 (81,2% n=128) estudantes do ciclo básico, 62 (82,7% n=75) do clínico, 82 (81,2% n=101) do internato, 15 (78,9%) residentes e 25 (83,3%) professores. Concluiu-se que a manifestação prévia da pessoa constitui critério relevante para doar seus órgãos e tecidos, o que pode favorecer o respeito à sua autonomia, a aceitação familiar e o aumento do número de doadores.
Palavras-chave: Obtenção de órgãos e tecidos. Legislação como assunto. Autonomia pessoal. Diretivas antecipadas.

Resumen

Percepción de los estudiantes y de los médicos sobre la autonomía en la donación de órganos

La legislación brasileña adopta la decisión familiar como criterio para la donación de órganos y tejidos. El objetivo de este trabajo fue identificar el conocimiento y la opinión de los médicos profesores, residentes y estudiantes de medicina sobre el tema. Se trata de un estudio descriptivo transversal con la aplicación de un cuestionario, al que respondieron 353 participantes: 304 estudiantes, divididos en tres ciclos de estudios, 19 residentes y 30 profesores. El 99,1% de las mujeres y el 94,9% de los hombres expresaron una opinión favorable sobre la donación de órganos y tejidos. Estuvieron de acuerdo que el criterio principal debe ser la voluntad de la persona, 104 (81,2% n=128) estudiantes del ciclo básico, 62 (82,7% n=75) del clínico, 82 (81,2% n=101) del internado, 15 (78,9%) residentes y 25 (83,3%) profesores. Se llegó a la conclusión de que la manifestación previa de la persona es un criterio relevante para la donación de sus órganos y tejidos, lo que puede favorecer el respeto de su autonomía, la aceptación de la familia y el aumento del número de donantes
Palabras clave: Obtención de tejidos y órganos. Legislación como asunto. Autonomía personal. Directivas anticipadas.

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The authors declare no conflict of interest.

Organ donation has been regulated by Law 9,434/1997[1] and modified by Law 10,211/2001[2], guaranteeing family members the right to remove organs and tissues from relatives up to second degree. Although article 14 of the 2002 Civil Code[3] allows people to make their organs available for scientific or altruistic purposes after death, a veto to the sole paragraph of article 4 of Law 9,434/1997 – which authorized donation from the living will – made it silent on the donor's participation in this process. This has given rise to divergent interpretations of legal provisions and, sometimes, ethical and legal conflicts between family power and the patient's very personal right in this decision[4].

Historically, most of the Brazilian population has been in favor of organ donation. In a 1995 survey conducted in the country by Instituto Datafolha, 75% of respondents expressed their desire to make their organs available for transplantation[5]. However, in 1998, shortly after the amendment of Law 9,434/1997, which set forth the presumed donation, this number dropped to 65%[5], picking up later. This oscillation is related to the population's fear concerning the lack of transparency and safety in organ procurement due to vested interests, but there is no updated data in this regard.

A 2014/2015 survey conducted in the metropolitan region of Belo Horizonte, Minas Gerais, Brazil, demonstrated that 81.1% of the 412 respondents would spontaneously surrender their organs for donation[6]. On the other hand, records from the Associação Brasileira de Transplante de Órgãos (ABTO) show that, also in Minas Gerais, 44% of families refused to donate organs from relatives in 2014, an index that rose to 66% between January and October 2018[7,8]. All across Brazil, family refusal reached 44% in 2018, indicating a possible mismatch concerning the majority's desire to donate organs, as noted by other authors[9].

Also, the emergence of the advance directives (ADL), a concept that is not widespread and that remains without legal provision in Brazil needs to be taken into consideration. With Resolution CFM 1,995/2012[10], the Conselho Federal de Medicina (CFM) regulated the directives within the scope of the medical profession with benefits for the entire population that wishes to use them. DAVs allow the appointment of a prosecutor and the record of wishes concerning health care, including the intention to donate organs and tissues. As is with instruments of self-determination, to guide decisions made by the medical team and the appointed attorney, the values and desires underlying the patient's life must be made clear in the document[11].

Although research points out that the majority of the Brazilian population is willing to donate organs and that most families consent with the donation, the waiting list for transplants is ever-growing[12], regardless of article 14 of the 2002 Civil Code[3] granting the human right to make the body available *post mortem*, in whole or in part, for scientific or altruistic purposes.

In this context, doctors are among the professionals who are in direct contact with most of the population, developing empathy in the relationship with the patient and their family. This phenomenon raises the hypothesis that the medical conduct adopted during the organ donation/procurement process may favor the honoring of the potential donor's will[13].

Therefore, the objective of this study was to assess the knowledge of medical professors, residents, and medical students about national legislation, individual autonomy, and the role of the ADL in organ and tissue donation. It is common-sense that this is an underlying knowledge for a respectful and qualified approach to the family, as well as for the meeting of the wishes of the deceased person, encouraging donation.

Method

This is an applied, observational research, with a quantitative, descriptive, exploratory, and transversal approach. The instrument for data collection was a survey comprised of 13 closed and 1 semi-open, for a total of 14 questions. We sought to assess the knowledge and opinion of the participants on the main criteria for organ and tissue donation in current Brazilian legislation; the most effective measure to increase the number of donors; and the possibility that, in the next five years, respondents would register their desire to donate organs and tissues in the form of an ADL.

The research sample was intentional and included 19 residents of the Hospital Universitário Santa Terezinha (Hust) working in clinical medicine, surgical clinic, and radiology; 30 doctors of different specialties and levels of education who are university professors; and 304 students from the 12 phases of the medical course. These were split into three groups: 1) basic cycle, students from the 1st to the 4th periods; 2) clinical cycle, from the 5th to the 7th periods; 3) internship, from the 8th to the 12th periods.

Participants were approached by a trained researcher in a standardized manner and agreed to complete the survey individually and voluntarily, signing a free and informed consent (ICF) in two copies. The following inclusion criteria were adopted: being a medical student; acting as a resident at Hust; or being a professor with a medical background. Subjects who skipped more than one answer in the

objective questions, and those who left the survey or ICF incomplete, were excluded from the sample.

The research was carried out between February and April 2018. Statistica 7.0 was the software used for statistical analysis. Differences were analyzed per Pearson's chi-squared test regarding the following variables: responses between groups and between sexes, when relevant. The analysis of the results respected the 95% confidence interval (p<0.05).

Results

Out of the 353 participants, there were 304 students (86.1%), 128 of the basic cycle (36.3%), 75 of the clinical cycle (21.2%), and 101 from the internship (28.6%); 30 medical professors (8.5%); and 19 residents linked to Hust (5.4%). Of this total, 137 (38.8%) were men and 216 (61.2%) were women. From the students, 109 (35.9%) were male and 195 (64.1%) were female. Their ages ranged between 18 and 35, with an average of 22.3 years old. As for residents, 9 (47.4%) were men and 10 (52.6%) were women aged between 24 and 34, with an average of 27.5 years old. The professors' group was composed of 19 (63.3%) men and 11 (36.7%) women, whose ages varied between 29 and 73, with an average of 46.9 years old.

Classes on subjects related to organ donation during graduation were attended by (percentages referring to the total of each subgroup): 18 students of the basic cycle (14.1%), 75 of the clinician cycle (100%), 99 from the internship (98%), 17 residents (89.6%), and ten professors (33.3%). Out of those who responded positively, 10 (7.8%) participants of the basic cycle stated that the depth of the content was insufficient, and 7 (5.5%) said it was satisfactory; 55 (73.3%) students in the clinical cycle considered the approach satisfactory, and 13 (17.3%) excellent; at internship level, 59 (58.4%) considered it satisfactory, and 21 (20.8%) excellent; out of the residents, 10 (52.6%) deemed this approach insufficient, and 6 (31.6%) satisfactory. Among the professors, 4 (13.3%) reported that the class depth was insufficient, and 4 affirmed it was satisfactory. The chi-squared test demonstrated a statistically relevant difference between the groups in the two questions, both concerning their contact with the subject during graduation and to the quality of the approach (p<0,001).

Their responses were strongly favorable regarding their desire to donate all or some organs, with: 121 students of the basic cycle (94.5%), 74 clinicians (98.7%), 100 interns (99%), 19 residents (100%), and 30 professors (100%) declaring their will to donate. Seven students of the basic cycle (5.5%), 1 of the clinician cycle (1.3%), and 1 from the internship group (1%) were against the idea. There was no statistical relevance regarding the differences in response by group (p=0,7145). In the analysis by sex, 184 women (85.2%) and 109 men (79.6%) would donate all organs and tissues; 30 (13.9%) and 21 (15.3%), respectively, would opt for a partial donation. 2 women (0.9%) and 7 men (5.1%) did not express a desire to donate, and the difference was significant (p=0,045).

Regarding having talked to their families about their intention to donate organs and tissues, it was found that 167 women (77.3%) and 82 men (59.9%) communicated this desire, while 49 women (22.7%) and 55 men (40.1%) did not, being the difference in the frequency of responses significant (p=0.0004). Regarding the main criterion for organs and tissue donation in Brazil, most of the participants were right to answer that it is family consent. The highest rate of correct answers was observed among students in the clinical cycle, as shown in Table 1.

Table 1. Participants' knowledge of the main criteria for organ and tissue donation in current Brazilian legislation

Replies	Students						Residents		Professors		Total	*p*
	Basic		Clinical		Internship							
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)		
Verbal authorization	10	7.8	7	9.3	21	20.8	6	31.6	2	6.7	46	–
Written authorization	35	27.3	6	8.0	9	8.9	2	10.5	7	23.3	59	<0,001
Family consent	78	61.0	61	81.3	70	69.3	10	52.6	17	56.7	236	–
Presumed donation	5	3.9	1	1.3	1	1.0	1	5.3	4	13.3	12	–

When it was stated that the main criterion for organ donation should be family consent: 11 undergraduates of the basic cycle (8.6%), 13 of the clinicians (17.3%), 14 from the internship (13.9%), 4 residents (21.1%), and 5 professors (16.7%) strongly agreed with the affirmation. Partly agreed: 53 students of the basic cycle (41.4%), 30 of the clinician cycle (40%), 37 from the internship (36.6%),

3 of the residents (15.8%), and six professors (20%). Disagreed: 34 (26.6%) of the basic cycle, 14 (18.7%) of the clinician cycle, 28 (27.7%) from the internship, 6 (31.6%) residents, and 10 (33.3%) professors.

Most participants fully or partially agreed that the main criterion should be a person's will manifested in life, regardless of family consent. Among these, 104 were students of the basic cycle (81.3%), 62 of the clinician cycle (82.7%), 82 from the internship (81.2%), 15 residents (78.9%), and 25 professors (83.3%). A minority disagreed with this statement, amounting for 12 students of the basic cycle (9.3%), 5 of the clinician cycle (6.7%), 5 from the internship (4.9%), 2 residents (10.5%), and 3 professors (10%), without statistical significance (p=0.740).

When asked about article 14 of the 2002 Civil Code[3] — which provides for the validity of the free disposal of the body itself or part of it for after death, for scientific or altruistic purposes — they agreed that this law should be decisive in the donation process: 77 students of the basic cycle (60.2%), 44 of the clinician cycle (58.7%), 57 from the internship (56.4%), 7 residents (36.8%), and 10 professors (43.3%). The dissenters were 12 residents (63.2%) and 17 professors (56.7%). The analysis of the frequency of responses between groups showed a difference close to significance (p=0.061).

Were in favor of the presumed donation, in which all people are donors unless previously stated otherwise, as the main criterion for organ and tissue donation: 63 students of the basic cycle (49.2%), 49 of the clinician cycle (65.3%), 59 from the internship (58.4%), 13 residents (68.4%), and 10 professors (50%). There was no significant difference between responses (p=0.445).

Most participants understood that the presumed donation would increase the number of donors (n=322, 91.2%), with 117 (91.4%) from the basic cycle, 69 (92%) from the clinician cycle, 93 (92.1%) from the internship, 18 (94.7%) residents, and 25 (83.3%) professors, with no significant difference (p=0.595). The respondents' opinion on the most effective measure to increase donations is detailed in Table 2, with no significant difference.

Table 2. Participants' opinions on the most effective measure to increase the number of organ donors

Replies	Students						Residents		Professors		Total	*p*
	Basic		Clinical		Internship							
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)		
Presumed donation	55	43.0	35	46.7	50	49.5	10	52.6	9	30.0	159	–
Patient consent donation	46	35.9	25	33.3	28	27.7	4	21.1	9	30.0	112	0.180
Patient and family consent donation	26	20.3	14	18.7	22	21.8	5	26.3	9	30.0	76	–
Other	1	0.8	1	1.3	1	1.0	0	0.0	3	10.0	6	–

As for their contact with ADL topics during graduation, 115 participants from the basic cycle (89.8%), 13 from the clinician cycle (17.3%), 4 from the internship (3.9%), 12 residents (63.2 %), and 24 professors (80%) responded negatively (p<0.001).

About having a document with a record of will about organ and tissue donation, 318 respondents answered negatively (90.1%), being 123 of the basic cycle (96.1%), 68 of the clinician cycle (90.7%), 89 from the internship (88.1%), 17 residents (89.5%), and 21 professors (70%) (p<0.001). The acceptance of the hypothesis of documenting their wishes in an ADL in the next five years was greater among participants in the internship (83.2%), in the clinical cycle (81.3%), and professors (76.7%), on a scale in which zero meant none and ten, had a great chance to do it; the results are listed in Table 3 (p=0.014).

Table 3. Possibility for participants to register an advance directive in the next five years communicating their desire to donate organs and tissues

Replies	Students						Residents		Professors		Total	*p*
	Basic		Clinical		Internship							
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)		
None	8	6.2	0	0.0	0	0.0	0	0.0	2	6.7	10	–
Little	7	5.5	7	9.3	4	3.9	2	10.5	1	3.3	21	0.014
Moderate	28	21.9	7	9.3	13	12.9	5	26.3	4	13.3	57	–
High	85	66.4	61	81.3	84	83.2	12	63.2	23	76.7	265	–

Responses considered: none: 0; little: 1 to 4; moderate: 5 to 7; high: 8 to 10

Discussion

Throughout their graduation, participants took classes on organ and tissue donation, as stated by the students in the clinical cycle and almost all interns. A similar study, carried out at the Faculdade de Medicina da Universidade de São Paulo, found that 56% of the students interviewed were never given such content in any discipline of the curriculum, although the lack of knowledge about the topic has gradually decreased, from 89.2% among students of the first year to 35% among those of the last year [14].

This index is significantly higher in the present study: on average, 99.5% of students in the clinical and internship cycles had the opportunity to study topics related to the subject. The statistically significant difference (p<0,001) highlights that undergraduate students attending the local medicine course, especially those in the aforementioned cycles, attribute a better rate to their contact with the topic and the quality of the discussion when compared to other participants who have graduated from different institutions.

Most residents had the opportunity to study organ and tissue donation at graduation, while only a third of the professors had access to the topic. This suggests a greater insertion of the discussion in the medical curricula in the last decades, a situation already evidenced in previous research carried out in São Paulo [14]. Most participants in the clinical cycle found the approach to the subject satisfactory during graduation, but this satisfaction decreased among intern students, as well as among residents and professors, revealing a recent improvement in teaching.

Almost all respondents expressed a desire to donate all or some organs. It is common sense that knowledge regarding the importance of this action explains their high adherence, which is higher than that of the general population according to a study carried out in Curitiba, Paraná [15], and Minas Gerais [6]. However, in this research, women showed greater intention than men (p=0,045). These results corroborate a trend already found among medical students by Chehuen Neto and collaborators [16], and the general population and health professionals interviewed by Bedenko and collaborators [15].

Likewise, the present study made evident that women talk more to their relatives about the desire to donate organs than men, with a significant difference in the matter. However, in a survey conducted in Juiz de Fora, Minas Gerais, there was a greater number of men who expressed their will to family members [16]. Ignoring the relative's intention to donate their organs is one of the main justifications by non-donor families, and this denial accounts for almost half the losses of potential donations [4,17].

Another survey, carried out at the Pontifícia Universidade Católica de São Paulo, indicated that 27% of medical students had never mentioned their choice on the subject [18]. This fact points to the need for people, especially men, to express their will more often.

Most respondents correctly indicated family consent as the main organ donation criterion, according to the Brazilian legislation in force. Similar data were found in two other studies, but with a higher number of correct answers, among medical students (85.1%) and health professionals (96%) [15,16]. The greater mastery of students on the guidelines for organ and tissue donation in the country suggests an improvement in the conveying of this content at the medical schools studied. In another survey, carried out with workers in the intensive care unit, most nurses (77.7%) and doctors (81.8%) also mentioned that family consent is mandatory [19].

Organ donation is currently regulated by Law 9,434/1997 [1], modified by Law 10,211/2001 [2], which transformed the donation status from presumed to consent, attributing the family members with the responsibility of deciding whether to donate the organs of their deceased relatives. Article 20 of Decree 9,175/2017 reaffirmed the power of family decision, by establishing that *the removal of organs, tissues, cells, and parts of the human body after death may only be carried out with the free and informed consent of the family of the deceased, expressly consigned in a specific authorization term* [20].

The desire to make organs available for transplants, granted by article 14 of the 2002 Civil Code [3], is not mentioned in this legislation, raising conflict between the family decision monopoly and the patient's autonomy [4]. Upon the approval of Law 9,434/1997 [1], article 4's sole paragraph, which determined: *the removal of tissues, organs, and parts of the body of deceased persons may be carried out based on a record made in life, by the person, in the Regulation* was vetoed. The main justification for the veto was the hypothesis of organ removal without family consent.

With the enforcement of the veto, the family decision was respected, but an ethical-legal gap was created in this process regarding the freedom of the individual, conferred by the Civil Code and the principle of autonomy. All transplantation teams

in the country always consult the relatives of the potential donor before removing their organs and tissues, even if there is a document from the person stating their will to donate [21].

Most participants understand that, according to Brazilian legislation, the patient's manifestation in life and their willingness to donate organs and tissues should prevail regardless of family consent. This result agrees with another study, in which 76% of the interviewed students believed that this would be the best way to achieve the successful donation [14]. Respecting the donor's will may offset the high rate of family rejection in Brazil.

Students within the three medical education cycles believe that Article 14 of the 2002 Civil Code [3] would be more appropriate and should be decisive in this process. However, most residents and professors disagreed. It is understood that the application of the Civil Code [3] would be more consistent within today's society, given the possibility of saving lives, reducing pain, suffering, and the high costs necessary to maintain the lives of people waiting for transplantation [4].

A possible means to resolve this impasse would be to change the wording of article 4 of Law 9,434/1997 [1], determining that the donation of tissues, organs or parts of the body for transplants or other therapeutic purposes should be guided (including or preferably) by the manifestation of the living donor [22] and, in the absence of such registration, by family consent.

This same position is found in Senate Bill 453/2017 [23], which guarantees the person's autonomy in donation, reinforcing the importance of choice in life. The Conselho Nacional de Justiça (CNJ) decided, through CNJ 277, that the disposition of organs must come from the person, however, their interpretation does not carry legal force [4]. The current law did not take the will of the possible donor regarding the fate of his organs into consideration, depriving them of self-determination and from participating in this decision [24].

Most respondents understood that presumed consent should be the main criterion in the country, which would favor an increase in the number of donors, as demonstrated by the international scenario [25]. In Brazil, in 1997, there was an attempt to change this legislation to the presumed model, unless otherwise stated in an official document. The law, however, had the opposite effect [9], as thousands of Brazilians registered as non-donors, due to the lack of understanding of the concept of brain death at the time [26]. Therefore, a change in the legislation without making the population aware of the donation process and its importance, as well as the effectiveness of the death criteria, is not enough.

Spain is currently the country with more donors per million population (pmp), and they have tried to adopt the presumed model in the 1980s. At the time, as it happened in Brazil, there was great controversy, which caused the government to change the law to determine the need for consultation with family members. To become a world leader in transplants, Spain invested in raising awareness among the population through educational campaigns, clarifying concepts of brain death and stimulating postmortem donation, as well as in training professionals specialized in this area, namely transplant coordinators [27].

Regarding their knowledge of ADLs, the results showed that most students of the basic cycle, residents, and professors did not have classes on this subject during graduation. Among those in the clinical cycle and internship, few reported not having studied this content, although it was presented in only two occasions during their studies. A probable reason for residents' and professors' lack of awareness on the ADL is how recent this subject is, having been regulated by Resolution CFM 1,995/2012 [10], which allows the free registration of the donor's wishes regarding the donation. We must emphasize, however, that Brazil still lacks proper legislation on the matter [11].

Although most of the participants were favorable to the manifestation and authorization for organ and tissue donation, almost all of them denied having a document with a record of will, except for a small number of professors. Most also stated that there was a high chance that they would be registering their intention in ADL within the next five years, which corroborates a study performed in South Korea with 303 oncologist doctors, in which 96.7% agreed with the need to fill the document [28]. ADLs allow illness and death not to be left to health professionals alone, reducing the patient to an incapacitated individual, but make them part of the decision process [29].

Brazil runs the largest public organ donation system in the world, with a significant increase in donors in recent years, although far from ideal for its population [30]. This complex process depends on several factors, such as the people's confidence in the system and the role of health professionals in the diagnosis of brain death. In eight years (2010–2017) [31], the rate of effective donors increased by 69% in the country, from 9.9 pmp to 16.7 pmp; potential donors' notification and the effectiveness of their donations increased by 41% and 21% respectively.

In 2018, donor rates reached 17 pmp [32], with family refusal rates at 43% [33], indicating an increase of 1% over the previous year [31] and showcasing the need to value people's autonomy.

To achieve this milestone, there is a need to mitigate the main causes of refusal, such as the population's little knowledge about the process, the lack of technical knowledge, and the inadequate approach of the hospital team to families [30]. As evidence of this failure in communication, a study developed in the United States pointed out that 39% of people involved in organ donation did not have their questions answered by health professionals [33]. A viable suggestion for the Brazilian state to overcome this sort of impediment would be the implementation of specific actions or policies through the Ministry of Health.

ADLs are adequate to record the person's desire whether to donate their organs, which should prevail over the will of family members. The elaboration of this document should be more encouraged in Brazil [34], but what currently takes place is the opposite, as the Brazilian system does not contemplate the ADL in specific laws on the subject. Although other nations allow ADLs to contemplate the desire for organ donation as a very personal decision, this does not happen in Brazil, where the family decision is a main reference [11].

Article 14 of the Civil Code [3], however, supports the will expressed on this matter by the person in life, with the possibility that it will influence the family decision. While comparing research carried out across the country and a more recent one, which took place in Belo Horizonte, Minas Gerais [4], with data provided by ABTO on family rejection in 2018 [8], it is estimated that the number of people who wish to donate their organs is greater than that of family acceptance (although another study in Curitiba failed to confirm this trend among men) [15].

Given the above, the importance of encouraging the personal manifestation of the will for the donation is emphasized, either by civic, legal, or specific health policy actions. Campaigns encouraging organ donation as an altruistic act and recommending the expression of this desire, especially to family members, would be useful to increase the number of donors and donations in a dignified and autonomous way.

Final considerations

The results of this study suggest a significant increase in opportunities for students and residents, during training, to participate in classes that address this subject. Contact with these issues can encourage action, as the decision to donate part or all the organs is significantly greater among participants when compared to the general population. It is also possible that the contact of these professionals, who are undoubtedly more sensitive to the cause, with families of donors contributes to spreading the adherence to the idea.

Although most participants expressed their support for donation, the results indicate that women are more likely to communicate their will to their families, corroborating the fact women with a higher level of information present greater potential for this issue.

Students of the clinical cycle have proven to have more knowledge regarding the current donation criterion in Brazil – the family consent –, although they support that the will manifested by the person in life, either verbally or in ADL, be honored. Therefore, there is a need to stimulate social debate to solve this legal and ethical problem.

The results lead to the conclusion that, according to the participants' perception, a change in legislation on the topic is in order, while keeping the need for the consented donation, but also guaranteeing the donor the fulfillment of their will, regardless of the family members' consent, although the latter must always be informed. This amendment should contribute to respect for the donor's autonomy, for family acceptance, and, consequently, for the increase in the number of donors.

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Participation of the authors

Lúcio Jary Almeida de Moraes and Gabrielle Trevisan collected and interpreted the data. Diego de Carvalho designed the study and performed the statistical analysis of the data. Jovani Antônio Steffani participated in the methodological review and interpretation of the data. Elcio Luiz Bonamigo coordinated the study. All authors contributed to the final writing of the article.

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Research

Appendix

Survey

Education: ( ) 1st to 4th phase ( ) 5th to 7th phase ( ) 8th to 12th phase ( ) Resident ( ) Medical professor
Age:
Gender:
Graduation time in years (for professors and residents):

1. During your graduation, were you given content about organ donation?
( ) Yes
( ) No

2. If the subject of organ donation was given during graduation, how do you evaluate the quality of the approach?
( ) Excellent
( ) Satisfactory
( ) Insufficient
( ) Poor
( ) I didn't have this content

3. Would you donate your organs?
( ) Yes, I would donate all possible organs.
( ) Yes, but I would donate only a few organs.
( ) No, I wouldn't.

4. Have you talked to your family about donating or not donating your organs?
( ) Yes
( ) No

5. According to current Brazilian legislation, the main criteria for organ donation is:
( ) Verbal authorization from the person.
( ) Written authorization from the person.
( ) Family consent.
( ) That all people are donors unless there is a contrary statement from the person (presumed donation).

6. The main criterion for organ donation should be the will manifested in life by a person, but dependent on family consent.
( ) I totally agree
( ) I partially agree
( ) I partially disagree
( ) I totally agree

7. The main criterion for organ donation should be the will manifested in life by a person, regardless of family consent.
( ) I totally agree
( ) I partially agree
( ) I partially disagree
( ) I totally agree

8. According to article 14 of the 2002 Civil Code, the free disposal of the body itself, in whole or in part, for after death is valid, with scientific or altruistic intent. Do you believe that this legislation should be spare in the donation, without conditioning of other authorizations?

( ) Yes

( ) No

9. Do you agree with the presumed organ donation, by which all people are donors unless previously stated otherwise?

( ) Yes

( ) No

10. In your opinion, would the presumed organ donation, by which everyone is an organ donor unless stated otherwise, contribute to the increase in the number of organ donations?

( ) Yes

( ) No

11. During graduation, were you given any content on advance directives (a document in which a lucid person registers their wishes regarding health care, organ donation, and appointment of a representative, among other things, to be fulfilled when they are rendered unable to communicate)?

( ) Yes

( ) No

12. Which measure do you consider to be most effective in increasing the number of organ donations?

( ) Presumed donation, by which all people are donors unless there is a personal manifestation to the contrary.

( ) Consent donation, by which the patient, verbally or through an Advance Directive, and/or the family decide on the donation.

( ) Consent donation, by which the person decides in advance for the donation, without the need for family consent.

( ) Another. Which? _____

13. Do you own any documents in which your will concerning organ donation is registered?

( ) Yes

( ) No

14. On a scale from 0 (impossible) to 10 (definitely possible), if you could register your wishes concerning organ donation in a document of Advance Guidelines, what is the likelihood of you doing so in the next five years?

( ) 0 ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( ) 6 ( ) 7 ( ) 8 ( ) 9 ( ) 10